| REPORT DOCUMENTATION PAGE | Form Approved OMB No. 0704-0188 |
|---|---|



| 1. REPORT DATE *(DD-MM-YYYY)* | 2. REPORT TYPE | 3. DATES COVERED *(From - To)* |
|---|---|---|
| 20-09-2010 | Environmental Assessment | 24-09-2009 - 12-10-2010 |

| 4. TITLE AND SUBTITLE | |
|---|---|
| Environmental Assessment for Termination of Lease and the Transfer of Property Back to the Landowner for the Morgan City, LA Tethered Aerostat Radar System (TARS) Site | 5a. CONTRACT NUMBER<br>FA4890-04-D-0009 |
| | 5b. GRANT NUMBER<br>N/A |
| | 5c. PROGRAM ELEMENT NUMBER<br>N/A |
| 6. AUTHOR(S)<br>Environmental Express Services, Inc.<br>(Jacqueline Baerwald; Gloria Hagge) | 5d. PROJECT NUMBER<br>N/A |
| | 5e. TASK NUMBER<br>Task Order 5019 |
| | 5f. WORK UNIT NUMBER<br>N/A |

| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) | 8. PERFORMING ORGANIZATION REPORT NUMBER |
|---|---|
| Environmental Express Services, Inc.<br>5944 FM 1863<br>Bulverde, TX 78163 | N/A |
| **9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)** | **10. SPONSOR/MONITOR'S ACRONYM(S)** |
| Ms. Teralyn R. Murray, PE<br>Chief, Environmental Branch<br>Langley AFB ACC AMIC/PCE<br>11817 Canon Blvd, Suite 306<br>Langley AFB, Virginia 23606 | N/A<br>**11. SPONSOR/MONITOR'S REPORT NUMBER(S)**<br>N/A |

**12. DISTRIBUTION/AVAILABILITY STATEMENT**

Unrestricted public availability

**13. SUPPLEMENTARY NOTES**

Prepared for the U.S. Air Force

**14. ABSTRACT**

Finding of No Significant Impact/Finding of No Practicable Alternative signed on September 14, 2010 for the Environmental Assessment (EA) of the proposed Termination of Lease and the Transfer of Property Back to the Landowner for the Morgan City, LA Tethered Aerostat Radar System (TARS) Site

**15. SUBJECT TERMS**

Environmental assessment

| 16. SECURITY CLASSIFICATION OF: a. REPORT | b. ABSTRACT | c. THIS PAGE | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| | | | | | Teralyn R. Murray |
| | | | | | 19b. TELEPHONE NUMBER *(Include area code)* |
| Unclassified | Unclassified | Unclassified | UU | 354 | 757-764-9460 |

*Final*

# ENVIRONMENTAL ASSESSMENT
# for Termination of Lease and the Transfer of Property Back to the Landowner for the Morgan City, LA Tethered Aerostat Radar System (TARS) Site

**August 2010**

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**ACRONYMS AND ABBREVIATIONS**

| | |
|---|---|
| ACAM | Air Conformity Applicability Model |
| ACM | Asbestos-Containing Material |
| AF | Air Force |
| AFB | Air Force Base |
| AFI | Air Force Instruction |
| AFPD | Air Force Policy Directive |
| ARTCC | Air Route Traffic Control Center |
| AST | Above-ground Storage Tank |
| BMPs | Best Management Practices |
| CAA | Clean Air Act |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CESQG | Conditionally Exempt Small Quantity Generator |
| CO | Carbon Monoxide |
| Customs | United States Customs |
| CWA | Clean Water Act |
| DoD | Department of Defense |
| EA | Environmental Assessment |
| EAC | Early Action Compact |
| EBS | Environmental Baseline Survey |
| EDR | Environmental Data Resources, Inc. |
| EIS | Environmental Impact Statement |

| | |
|---|---|
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| ERP | Environmental Restoration Program |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| FONPA | Finding of No Practicable Alternative |
| FONSI | Finding of No Significant Impact |
| HVAC | Heating, Ventilation, and Air Conditioning |
| L | Liter |
| LADoT | Louisiana Department of Transportation |
| LBP | Lead-Based Paint |
| LDEQ | Louisiana Department of Environmental Quality |
| LEP | Linear Extensibility Percentage |
| MBTA | Migratory Bird Treaty Act |
| MEK | Methyl Ethyl Ketone |
| mg/L | Milligrams per Liter |
| MLRA | Major Land Resource Area |
| MSDS | Material Safety Data Sheet |
| MSL | Mean Sea Level |
| NAAQS | National Ambient Air Quality Standards |
| NCSS | National Cooperative Soil Survey |
| NEPA | National Environmental Policy Act |

| | |
|---|---|
| $NO_2$ | Nitrogen Dioxide |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| NWI | National Wetlands Inventory |
| OAQPS | Office of Air Quality Planning and Standards |
| OSHA | Occupational Safety and Health Administration |
| Pb | Lead |
| PCB | Polychlorinated Biphenyl |
| PCi | Picocuries |
| PEM1F | Palustrine, Emergent, Persistent, Semipermanently Flooded wetland |
| PEM1Fd | Palustrine, Emergent, Persistent, Semipermanently Flooded, Partly Drained wetland |
| PFO1C | Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded wetland |
| PFO2F | Palustrine, Forested, Needle-Leaved Deciduous, Semipermanently Flooded wetland |
| PFO2T | Palustrine, Forested, Needle-Leaved Deciduous, Semipermanent-Tidal wetland |
| PM | Particulate Matter |
| POL | Petroleum, Oil, and Lubricant |
| ppm | Parts per Million |
| PSS1C | Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded wetland |
| PSS1F | Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Semipermanently Flooded wetland |
| RCRA | Resource Conservation and Recovery Act |
| SARA | Superfund Amendments and Reauthorization Act |
| SIP | State Implementation Plan |

| | |
|---|---|
| $SO_2$ | Sulfur Dioxide |
| SSC | Species of Special Concern |
| TARS | Tethered Aerostat Radar System |
| tpy | Tons per Year |
| U.S. | United States |
| USC | United States Code |
| USDA | United States Department of Agriculture |
| USFWS | United States Fish and Wildlife Service |
| UST | Underground Storage Tank |
| WADS | Western Air Defense Sector |

## FINDING OF NO SIGNIFICANT IMPACT (FONSI)
## AND
## FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)

### 1.0 NAME OF THE PROPOSED ACTION

Environmental Assessment (EA) for the proposed action of returning the Morgan City Tethered Aerostat Radar System (TARS) Site located in St. Mary Parish, Louisiana, to the landowner with the existing structures, utility systems, pavements, and fences remaining in-place.

### 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

An EA was prepared to evaluate the potential environmental impacts of the full implementation of the Proposed Action.

**Proposed Action**
The Proposed Action includes returning the Morgan City, Louisiana TARS Site to the landowner, Glencoe-Vacherie Plantation, LTD, with all existing structures, utility systems, pavements, and fences remaining intact. All buildings currently on the site would remain on the site. In addition, the aerostat mooring system, concrete launching pad, wastewater treatment plant, septic tank, generator, water storage tank, diesel storage tank, and all fencing around the perimeter of the facility and on the facility would remain in place. All electrical and water lines would remain including the telephone/power poles, underground electric duct banks, armored cables, water and sewer pipes, metal drainage pipes, and telephone cables. In addition, all roads, sidewalks, parking areas, curbs, and gutters would remain in place.

**Alternative A**
The Air Force proposes to demolish the TARS Site located in St. Mary Parish, Louisiana, and to restore the property to its original configuration. This would include the removal of the buildings and site infrastructure. In addition, it would involve potential earth disturbance over a substantial portion of the site. However, the majority of the disturbance is expected to be insignificant, only involving approximately the top foot of soil, except where foundations, underground utility lines, and manholes are removed.

The Morgan City, LA TARS Site may be located within threatened Louisiana black bear critical habitat and is approximately 1,500 feet from breeding habitat. If implementation of Alternative A were to occur, the U.S. Fish and Wildlife Service (USFWS) recommends that any work in the project area be prohibited during the denning season (December-April). If demolition or restoration activities were to occur during the denning season, then further consultation with the USFWS is necessary prior to the start of these activities. Under implementation of Alternative A, workers are urged to avoid bears and be cautious not to leave food or garbage in the field. In addition, the Louisiana

Department of Wildlife and Fisheries recommends the use of bear-proof garbage containers on site.

Under implementation of Alternative A, best management practices (BMPs) should be incorporated into demolition activities to avoid direct and indirect impacts to wetlands and other natural resources. BMPs include, but are not limited to, the following: erosion prevention, sediment control measures, water quality treatment measures, and using designated areas for vehicle staging.

Appendix K includes BMPs that are applicable if Alternative A is selected, concerning Louisiana black bear habitat, erosion control, and practices for avoidance of wetlands.

**Alternative B**
The Air Force proposes to purchase the property formerly used as the Morgan City, LA TARS Site at fair market value. The Air Force would perform a land acquisition to secure the property through fee title acquisition. Fee title acquisition acquires the land in fee title through donation, bargain sale, or outright purchase.

**Alternative C**
The Air Force proposes to acquire the property formerly used as the Morgan City, LA TARS Site from the landowner through land condemnation. Land condemnation involves the Air Force acquiring the property for the purpose of public use upon payment of "just compensation."

**Alternative D (No-Action Alternative)**
Under the No-Action Alternative, no change would occur at the Morgan City, LA TARS Site. The Air Force would continue to lease the property. The site would remain in cold storage, employing no personnel, except contract grounds maintenance and security personnel. The environmental and socioeconomic conditions would remain unchanged.

## 3.0 ENVIRONMENTAL EFFECTS

In general, no significant impacts were identified during the evaluation of the Proposed Action and alternatives. The following resources and infrastructure requirements were identified and evaluated as having no significant impacts:

| Resource and Infrastructure | Potential Impact |
|---|---|
| *Land Use, Visual Resources, and Recreation* | There would be no impacts to recreational activities. However, under implementation of the Proposed Action and Alternative A, land use would change since the landowner would resume control of the site and the site would no longer be used for military purposes. In addition, under implementation of Alternative A, there would be a temporary, negative effect to |

| Resource and Infrastructure | Potential Impact |
|---|---|
| | the visual resources during demolition activities. |
| *Socioeconomics and Environmental Justice* | There would be no impacts to environmental justice. Under the Proposed Action, there would be a temporary, negative impact to socioeconomics due to the loss of maintenance and security personnel's loss of jobs; however, this impact is negligible. Under implementation of Alternative A, there would be a temporary, positive impact to socioeconomics due to creation of jobs during demolition and restoration activities; however, this impact is short-term and negligible. |
| *Cultural Resources* | There would be no impacts. |
| *Infrastructure* | There would be no impacts under implementation of the Proposed Action, Alternatives B, C, or D. Under Alternative A, there could be a temporary impact to traffic in the project area during demolition and restoration activities. In addition, the infrastructure would be affected under Alternative A since all buildings, utility systems, roads, pavements, fences, etc. would be removed. |
| *Physical Resources* | There would be no impacts under implementation of the Proposed Action, Alternatives B, C, or D. Under Alternative A, there would be a temporary impact to soils during demolition activities and a possible, temporary impact to surface water quality from erosion contributing to turbidity of runoff and possible contamination from spills or leaks of construction equipment. However, if BMPs for erosion control were utilized during demolition activities, any temporary impacts to surface water would be negligible. |
| *Hazardous Materials and Waste* | There would be no impacts. Under implementation of Alternative A, any hazardous materials or waste present at the site would be disposed of under the requirements of CERCLA. In addition, |

| Resource and Infrastructure | Potential Impact |
| --- | --- |
| | any lead-based paint discovered during demolition activities would be disposed of according to OSHA and RCRA regulations. |
| *Biological Resources* | There would be no impacts under implementation of the Proposed Action, Alternatives B, C, or D. Under Alternative A, there would be a temporary, negative impact to vegetation during demolition activities. However, following restoration activities, the site would return to conditions similar to those that existed prior to construction of the site, which would be considered a long-term, positive impact since the site's natural condition would be restored. There could also be a temporary, negative impact to wildlife species during demolition and restoration activities; however, following restoration of the site, the impacts to wildlife species would be positive since more natural habitat would be available. The TARS Site is located near the federally threatened Louisiana black bear's habitat; thus, implementation of Alternative A could result in a potential, adverse impact to this threatened species. The USFWS should be contacted prior to implementation of this alternative and BMPs for avoiding the black bear should be utilized. |
| *Air Quality* | There would be no impacts under implementation of Alternatives B, C, or D. Under the Proposed Action, there would be a positive impact to air quality due to the elimination of contract grounds maintenance and security personnel transportation. Under implementation of Alternative A, there would be temporary, localized effects to air quality during demolition from vehicle emissions and operation of machinery; however, the amount of emissions would be negligible. |
| *Airspace* | There would be no impacts under implementation of Alternatives B, C, or D. Under the Proposed Action and Alternative |

| Resource and Infrastructure | Potential Impact |
|---|---|
| | the elimination of contract grounds maintenance and security personnel transportation. Under implementation of Alternative A, there would be temporary, localized effects to air quality during demolition from vehicle emissions and operation of machinery; however, the amount of emissions would be negligible. |
| *Airspace* | There would be no impacts under implementation of Alternatives B, C, or D. Under the Proposed Action and Alternative A, there would be a long-term, positive impact due to the restricted airspace no longer being needed. |

## 4.0 FINDINGS

**Finding of No Practicable Alternative:** Pursuant to Executive Order 11988, *Floodplain Management*, and taking the information contained in the attached Environmental Assessment in consideration, I find that there is no practicable alternative to the demolition and restoration activities presented in Alternative A, due to the TARS Site's location within a 100-year floodplain and including the Terms of the Addendum to the U.S. Government Lease dated August 1, 1992. The lease termination provision provides that upon termination and property transfer, the landowner (Glencoe-Vacherie Plantation, LTD) may demand the Air Force (AF) to remove the improvements and restore the property to its original condition as near as practicable. Therefore, the AF must analyze Alternative A activities, as designed, to remove or demolish improvements and restore the leased property, and, consider all practicable measures to minimize harm to the floodplain.

**Finding of No Significant Impact:** Based on information and analysis presented in the Environmental Assessment, which is hereby incorporated by reference, and conducted in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations, and implementing regulations set forth in 32 CFR 989 (Environmental Impact Analysis Process), as amended, and review of the public and agency comments submitted during the 30-day public comment period, I conclude that implementation of the Proposed Action would not result in significant impacts to the quality of the human or natural environment. For these reasons, a Finding of No Significant Impact (FONSI) is warranted and preparation of an Environmental Impact Statement (EIS) is not required.

G. Chesley

GARY D. CHESLEY, Colonel, USAF
Deputy Director, Installations & Mission Support

14 SEP 10
Date

# EXECUTIVE SUMMARY

The purpose of this Environmental Assessment (EA) is to assess the potential environmental effects - positive or negative - that the Proposed Action or Alternatives may have on the environment, considering natural, social, and economic aspects. The purpose of the assessment is to ensure the Air Force (AF) considers the ensuing environmental effects to decide whether to proceed with the Proposed Action or the alternatives.

The Proposed Action includes returning the Morgan City, LA TARS Site to the landowner, Glencoe-Vacherie Plantation, LTD, with all existing structures, utility systems, pavements, and fences remaining intact. All buildings currently on the site would remain on the site. In addition, the aerostat mooring system, concrete launching pad, wastewater treatment plant, septic tank, generator, water storage tank, diesel storage tank, and all fencing around the perimeter of the facility and on the facility would remain in place.

Under Alternative A, the Air Force proposes to demolish the TARS Site and to restore the property to its original configuration. This would include the removal of the buildings and site infrastructure. According to the U.S. Fish and Wildlife Service (USFWS), "the proposed project site may be located within threatened Louisiana black bear critical habitat and is approximately 1,500 feet from breeding habitat" (Appendix A, page A-13). In addition, the Morgan City, LA TARS Site is located within a 100-year floodplain. Therefore, under implementation of this alternative, best management practices (BMPs) should be incorporated into demolition activities to avoid direct and indirect impacts to Louisiana black bear habitat, the 100-year floodplain, nearby wetlands, and other natural resources. Appendix K includes a list of these BMPs that are applicable if Alternative A is selected. According to the Terms of the Addendum to the U.S. Government Lease dated August 1, 1992, the landowner (Glencoe-Vacherie Plantation, LTD) may demand the Air Force, upon lease termination and property transfer, to remove the improvements and restore the property to its original condition as near as practicable. Therefore, the Air Force must analyze Alternative A activities, as designed, to remove or demolish improvements and restore the leased property, and, consider all practicable measures to minimize harm to the floodplain.

Under Alternative B, the Air Force proposes to purchase the property formerly used as the Morgan City, LA TARS Site at fair market value. The Air Force would perform a land acquisition to secure the property through fee-title acquisition. Fee title acquisition acquires the land in fee title through donation, bargain sale, or outright purchase.

Under Alternative C, the Air Force proposes to acquire the property formerly used as the Morgan City, LA TARS Site from the landowner through land condemnation. Land condemnation involves the Air Force acquiring the property for the purpose of public use upon payment of "just compensation."

Under Alternative D (No-Action Alternative), no change would occur at the Morgan City, LA TARS Site. The Air Force would continue to lease the property. The site would remain in cold storage, employing no personnel, except contract grounds maintenance and security personnel.

The following table provides a summary of the effects of implementing each alternative.

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| Land Use, Visual Resources, and Recreation | • *Proposed Action*: No significant effects to land use or recreation at the site or surrounding land; however, land use would change since the landowner would resume control of the site, and the site would no longer be used for military purposes. No significant effects to visual resources would occur.<br>• *Alternative A*: No significant effects to land use or recreation at the site or adjacent areas; however, it is possible for the site to return to its previous use as a sugarcane plantation following demolition and restoration. In addition, land use would change since it would no longer be used for military purposes. Temporary, negative effects to visual resources would occur during demolition of the site.<br>• *Alternative B*: No significant effects to land use, visual resources, and recreation would occur.<br>• *Alternative C*: No significant effects to land use, visual resources, and recreation would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Socioeconomics and Environmental Justice | • *Proposed Action*: Temporary, negative effect to socioeconomics due to the contract maintenance and security personnel's loss of jobs; however, this effect in considered negligible. No significant effects to environmental justice would occur.<br>• *Alternative A*: Temporary, positive effect to socioeconomics due to creation of jobs during site demolition and restoration; however, these effects are considered negligible and short-term. No significant effects to environmental justice would occur.<br>• *Alternative B*: No significant effects to socioeconomics or environmental justice would occur.<br>• *Alternative C*: No significant effects to socioeconomics or environmental justice would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Cultural Resources | • *Proposed Action*: No significant effects to cultural resources would occur.<br>• *Alternative A*: No significant effects to cultural resources would occur.<br>• *Alternative B*: No significant effects to cultural resources would occur.<br>• *Alternative C*: No significant effects to cultural resources would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Infrastructure | • *Proposed Action*: No significant effects to infrastructure would occur.<br>• *Alternative A*: Possible, temporary effect to traffic in the area during demolition and restoration activities; however, this effect is considered short-term. In addition, there would be a change to the infrastructure |

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| | since all buildings and infrastructure would be removed.<br>• *Alternative B*: No significant effects to the infrastructure would occur.<br>• *Alternative C*: No significant effects to the infrastructure would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Physical Resources | • *Proposed Action*: No significant effects to the physical resources would occur.<br>• *Alternative A*: Temporary effect to soils during demolition activities would occur. Possible, temporary effects to surface water quality during demolition of the site from possible erosion contributing to turbidity of runoff and possible contamination from spills or leaks from construction equipment could occur. Erosion control best management practices (BMPs) should be followed to minimize and control erosion and discharge of sediment. Provided BMPs are utilized during demolition and restoration, any effect to surface water should be minimal.<br>• *Alternative B*: No significant effects to the physical resources would occur.<br>• *Alternative C*: No significant effects to the physical resources would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Hazardous Materials and Hazardous Waste | • *Proposed Action*: No change from current conditions.<br>• *Alternative A*: There would be no significant effects; any hazardous materials or waste present at the site would be disposed of under the requirements of CERCLA; any LBP discovered during demolition activities would be disposed of according to OSHA and RCRA regulations<br>• *Alternative B*: No significant effects to hazardous materials and waste would occur.<br>• *Alternative C*: No significant effects to hazardous materials and waste would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Biological Resources | • *Proposed Action*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative A*: Temporary, negative effect to vegetation during demolition activities would occur. However, following restoration activities, the site would return to conditions similar to those that existed prior to construction of the site, which is considered a long-term, positive effect since the site's natural condition would be restored. Possible, short-term effect to wildlife species during demolition could occur; however, long-term effect would be beneficial to wildlife species since the site would be reseeded to its original state and more natural |

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| | habitat would be available. Potential, adverse effect to the federally threatened Louisiana black bear's critical habitat could occur. Prior to implementation of this alternative, the USFWS would need to be contacted and BMPs for avoiding the black bear should be utilized.<br>• *Alternative B*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative C*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Air Quality | • *Proposed Action*: Positive effect to air quality due to the elimination of contract grounds maintenance and security personnel transportation.<br>• *Alternative A*: Potential for temporary, localized effects to air quality during demolition from vehicle emissions and operation of machinery could occur. However, the amount of emissions would be negligible. Table 4-1 contains estimated air emission numbers.<br>• *Alternative B*: No significant effects to air quality would occur.<br>• *Alternative C*: No significant effects to air quality would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Airspace | • *Proposed Action*: There would be a long-term, positive effect to the airspace since the Restricted Area R-3870 would no longer be needed.<br>• *Alternative A*: There would be a long-term, positive effect to the airspace since the Restricted Area R-3870 would no longer be needed.<br>• *Alternative B*: No significant effects to air space would occur.<br>• *Alternative C*: No significant effects to air space would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |

The Morgan City, LA TARS Site was active from 1992 to 2002. However, in 2002, the site was no longer needed and was placed in cold storage. In 2004, the site was placed in caretaker status in which security and grounds maintenance personnel maintain the property.

This EA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 United States Code 4321-4347), Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR Part 989, et seq., *Environmental Impact Analysis Process* (formally known as Air Force Instruction 32-7061).

# 1.0 PURPOSE AND NEED

## 1.1 INTRODUCTION

The purpose of this Environmental Assessment (EA) is to assess the potential environmental effects that may occur from vacating the leased property located in St. Mary Parish, Louisiana, formerly used as the Morgan City, LA Tethered Aerostat Radar System (TARS) Site. The property would be returned to the landowner, Glencoe-Vacherie Plantation, LTD (St. Mary Parish, LA), with the existing structures, utility systems, pavements, and fences remaining in tact. This EA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 United States Code 4321-4347), Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508, and 32 CFR Part 989, et seq., *Environmental Impact Analysis Process* (formally known as Air Force Instruction 32-7061).

The Tethered Aerostat Radar System is an aerostat-borne radar. Its primary mission is to provide radar data in support of other federal agencies involved in the nation’s drug interdiction program. This program consists of multiple land-based, low-level radar surveillance aerostats along the United States (U.S.) southern border and Mexico, the Straits of Florida, and the Caribbean. Each aerostat is a large fabric envelope filled with helium that can reach altitudes up to 15,000 feet. The four main parts of the aerostat are the (1) hull and fin, (2) windscreen and radar platform, (3) airborne power generator, and (4) rigging and tether (Figure 1-1). The hull of the aerostat consists of an upper and lower chamber that is separated by a gas-tight fabric partition. The upper chamber is filled with helium, which gives the aerostat lifting capability. The lower chamber is a pressurized air compartment, referred to as a ballonet. The ballonet pressurizes the helium chamber to maintain aerostat hull integrity. The radar platform is located in the windscreen compartment. The airborne power generator consists of an airborne engine control unit that drives the generator, and a 100-gallon diesel fuel tank that supplies the generator. The rigging consists of flying suspension lines that are connected to the main tether, and mooring suspension lines.

In 1981, the Federal Aviation Administration (FAA) advised U.S. Customs (Customs) to begin seeking out aerostat sites along the southwest border and the gulf. By 1984, the requirement for the TARS network was established by Customs to help counter illegal drug trafficking. In 1987, Customs began seeking proposal requests from contractors for these aerostats. In 1992, Customs entered into a lease agreement with Glencoe-Vacherie Plantation, LTD (St. Mary Parish, LA), for a piece of property within St. Mary Parish, Louisiana. The Morgan City, LA TARS Site became active in 1992. However, in October 2002, the Morgan City, LA TARS Site was no longer needed and was placed in cold storage. At this time, the aerostat radar was removed from the site. In March 2004, the TARS Site was placed in caretaker status. Currently, the Morgan City TARS Site remains inactive and employs no personnel, except contract grounds maintenance and security personnel.

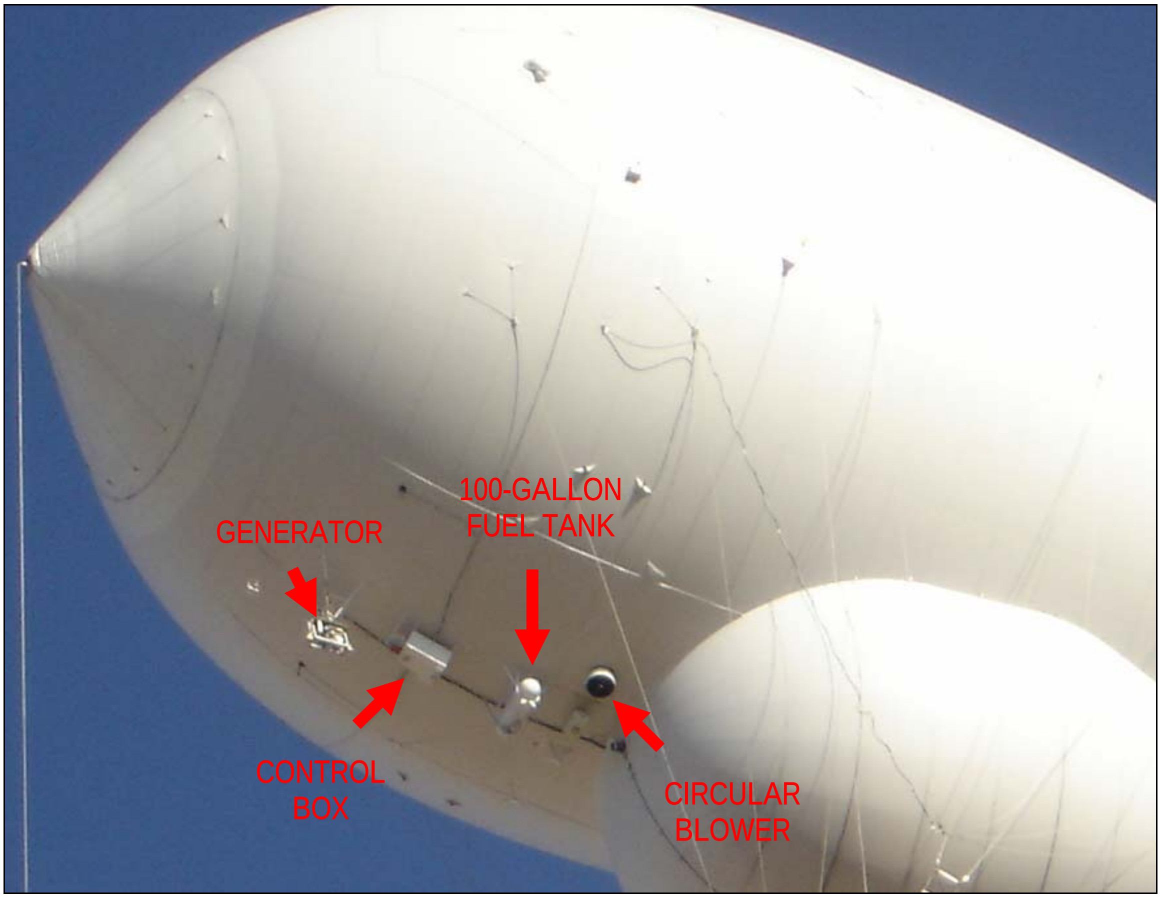
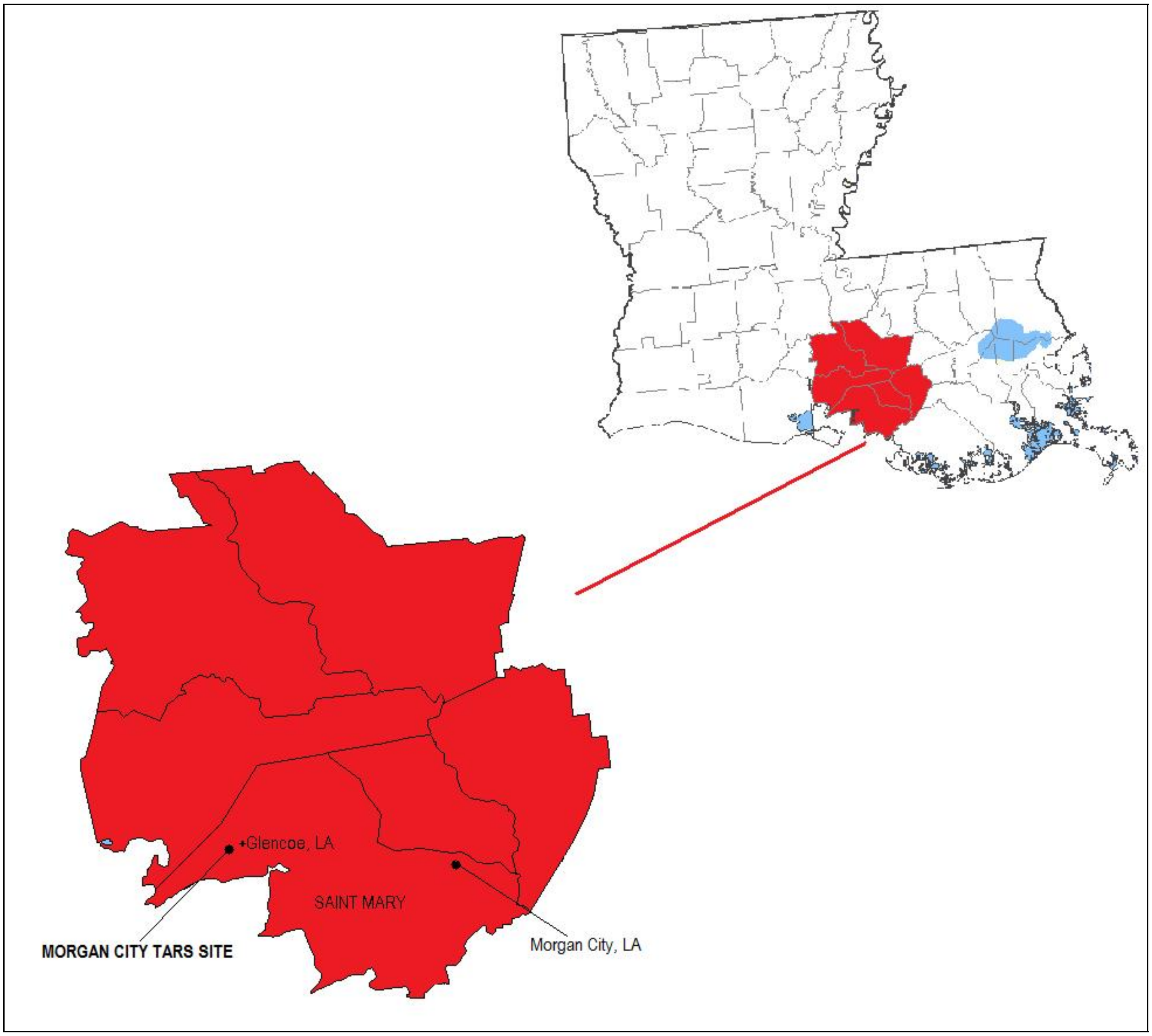



**Figure 1-1**
**Underside of the Aerostat Radar**

## 1.2 BACKGROUND

The Morgan City, LA TARS Site is located in St. Mary Parish in the state of Louisiana (Figure 1-2). The site comprises 23.9 acres of a 253.88-acre tract of land, located in Section 7, Township 14 South, Range 8 East, St. Mary Parish, LA. The Morgan City, LA TARS Site is located approximately 40 miles west of Morgan City, LA, near the rural community of Glencoe (Figure 1-3).

The TARS Site includes the following structures: aerostat launch and recovery pad, mooring rail and ramps, Operations Building (Building 001), Vehicle Maintenance Building (Building 002), Payload Service Building (Building 003), Electrical Power Station Building (Building 045), Mechanical Building (Building 005), Hazardous Waste Building (Building 006), and Security Building (Building 004). These structures are located on the southern portion of the site. The center of the site consists of the concrete launching pad and the mooring system for the aerostat. However, the aerostat and associated TARS equipment is not currently present on-site. Figure 1-4 shows the layout of the Morgan City, LA TARS Site. In March 2004, the Morgan City TARS Site was placed in caretaker status. It currently remains inactive.




*Source: Adapted from National Atlas; www.nationalatlas.gov/*

**Figure 1-2**
**State of Louisiana, Morgan City TARS Site Location**

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*Source: Adapted from Rand McNally; www.randmcnally.com*

**Figure 1-3**
**Location of the Morgan City TARS Site within St. Mary Parish, Louisiana**

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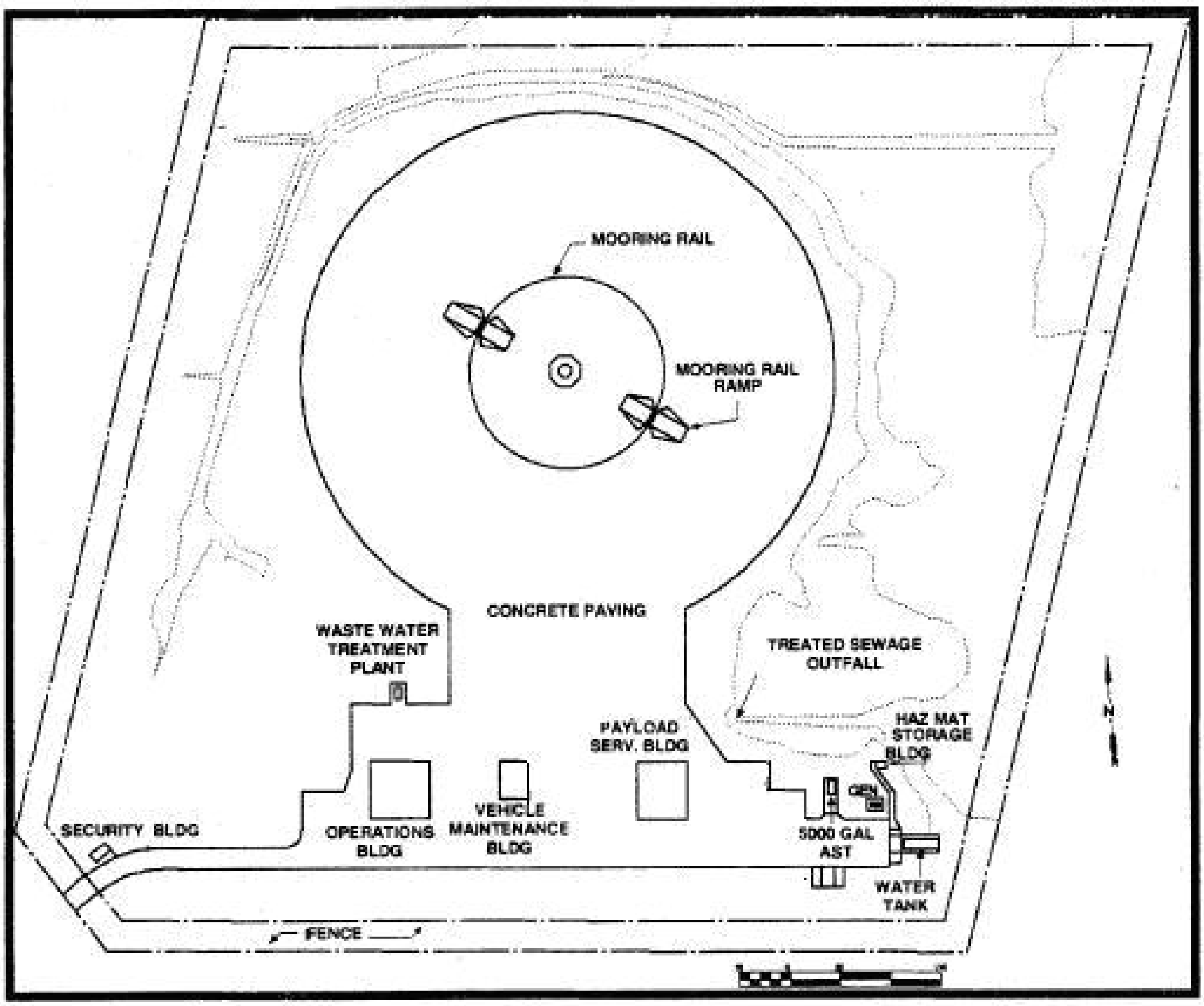


**LEGEND**

Building 001: Operations Building
Building 002: Vehicle Maintenance Building
Building 003: Payload Service Building
Building 004: Security Building
Building 005: Mechanical Building
Building 006: Hazardous Waste Building
Building 045: Electrical Power Station Building

*Source: Adapted from the 2003 Morgan City TARS EA/EBS*

**Figure 1-4**
**Tethered Aerostat Radar System (TARS) Site, Morgan City, Louisiana Site Layout**

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## 1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to return the Morgan City, LA TARS Site to the landowner with the existing structures, utility systems, pavements, and fences remaining in-place. The facility has been in cold storage for seven years and is no longer needed. Therefore, managing and providing ground maintenance and security for this site is ineffective and an inefficient use of Government resources. The Government desires to terminate the lease and discontinue ground maintenance and security for the facility.

The Morgan City, LA TARS Site has been deactivated since October 2002 and has remained in cold storage for the past seven years. The Proposed Action would not adversely affect the TARS program objectives.

## 1.4 ORGANIZATION OF THE DOCUMENT

This EA is organized into seven chapters plus appendices. *Chapter 1* includes background information and explains the purpose and need for the Proposed Action. *Chapter 2* provides a detailed description of the Proposed Action and alternatives. *Chapter 3* contains a description of the existing conditions at the Morgan City, LA TARS Site. *Chapter 4* provides a description of the potential environmental consequences of implementing the Proposed Action and alternatives. *Chapter 5* is a discussion of the potential cumulative effects and irreversible and irretrievable commitment of resources. *Chapter 6* contains a list of preparers for the EA. *Chapter 7* includes a list of references used in preparing the EA. *Appendix A* contains scoping letters sent to various state and federal agencies, along with responses from these agencies. *Appendix B* contains photographs of the Morgan City, LA TARS Site. *Appendix C* contains the hazardous materials inventory for the Morgan City, LA TARS Site. *Appendix D* includes a report on the recycling of concrete containing lead-based paint (LBP). *Appendix E* contains the Environmental Data Resources (EDR) Radius Map Report with GeoCheck. *Appendix F* contains various site inspection documents, including the Phase I Environmental Baseline Survey (EBS) for the Morgan City TARS Site (September 1994), Final EBS for Morgan City TARS Site (March 2000), Final EA for Morgan City TARS Site Environmental Audit for Downsizing (August 2001), EA/EBS for the Morgan City TARS Site (April 2003), and the Final EBS for the Morgan City TARS Site (August 2009). *Appendix G* is a list of threatened and endangered species found in St. Mary Parish, Louisiana. *Appendix H* is additional resources used in the preparation of this EA, including the cultural resources survey performed prior to construction of the site, the St. Mary Parish Soil Survey, additional information on the Louisiana black bear and piping plover, and erosion control best management practices (BMPs). *Appendix I* includes a review comment matrix that outlines the public and government review comments received at each stage of the EA, and their corresponding responses. *Appendix J* contains projected air emission calculations for demolition of the Morgan City, LA TARS Site. *Appendix K* includes BMPs that are applicable is Alternative A is selected, concerning instructions for working within Louisiana black bear habitat, practices to avoid impacts to wetlands and floodplains, erosion control methods, etc.

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# 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

## 2.1 PROPOSED FEDERAL ACTION

The Proposed Action includes returning the Morgan City, LA Tethered Aerostat Radar System (TARS) Site to the landowner, Glencoe-Vacherie Plantation, LTD (St. Mary Parish, LA), with all existing structures, utility systems, pavements, and fences remaining intact. All buildings currently on the site would remain on the site, including the Operations Building (Building 001), Vehicle Maintenance Building (Building 002), Payload Service Building (Building 003), Electrical Power Station Building (Building 045), Hazardous Waste Building (Building 006), Security Building (Building 004), and Mechanical Building (Building 005). In addition, the aerostat mooring system, concrete launching pad, wastewater treatment plant, septic tank, generator, water storage tank, diesel storage tank, and all fencing around the perimeter of the facility and on the facility would remain in place. All electrical and water lines would remain, including the telephone/power poles, underground electric duct banks, armored cables, water and sewer pipes, metal drainage pipes, and telephone cables. In addition, all roads, sidewalks, parking areas, curbs, and gutters would remain in place.

## 2.2 ALTERNATIVE A

According to the Terms of the Addendum to the U.S. Government Lease dated August 1, 1992, the landowner (Glencoe-Vacherie Plantation, LTD) may demand the Air Force upon lease termination and property transfer to remove the improvements and restore the property to its original condition as near as practicable. Therefore, the Air Force must analyze Alternative A activities, as designed, to remove or demolish improvements and restore the leased property, and, consider all practicable measures to minimize harm to the floodplain.

Under this Alternative, the USAF proposes to demolish all facilities and restore the site to its original configuration. Prior to any demolition activities, Occupational Safety and Health Administration (OSHA) Standard 1926.850(a) requires that an engineering survey be conducted. The engineering survey is not required prior to completion of this EA, but is needed if Alternative A is implemented, prior to any demolition activities. This survey will determine the condition of the framing, floors, and walls of all structures that are to be demolished. This survey will allow measures to be taken, if necessary, to prevent the premature collapse of any portion of the structures. As part of this survey, it shall be determined if any hazardous chemicals, gases, explosives, flammable materials, or similar dangerous substances exist or have been used on the site.

All electric, gas, water, steam, sewer, and other service lines would be shut off, capped, or otherwise controlled before any demolition work commences. Each utility company that is involved would be contacted in advance for their approval or services. If any utility lines require maintenance during demolition, these lines would be temporarily relocated and protected. In addition, the location of all overhead power sources would be determined to avoid any accidents.

Best Management Practices (BMPs) that should be incorporated under implementation of this alternative are identified in Appendix K.

### 2.2.1 DEMOLITION ACTIVITIES

As part of the demolition activities, all buildings would be demolished, as well as any wood, steel, concrete, elevated slabs, footings, foundation, floors, and walls associated with each of the buildings. In addition, all heating, ventilation, and air conditioning (HVAC) systems and coolant fluid would also be removed from each of the buildings, as well as all circuit breakers and transformers. There are 15 HVAC systems in the Operations Building (Building 001), 3 in the Vehicle Maintenance Building (Building 002), 5 in the Payload Service Building (Building 003), and 1 in the Security Building (Building 004). There are six circuit breakers in the Operations Building (Building 001), one in the Vehicle Maintenance Building (Building 002), one in the Payload Service Building (Building 003), one in the Security Building (Building 004), and two in the Mechanical Building (Building 005). There are three transformers on-site (one in the Operations Building (Building 001), one in the Payload Service Building (Building 003), and one in the Mechanical Building (Building 005); these would also need to be removed from the site.

Within the Operations Building (Building 001) is a dishwasher hood that would be cleaned and disposed. In addition, the following items are located in the Operations Building (Building 001) that would be discarded: one garbage disposal, one shower stall and receptor, one water closet fixture, one single-compartment sink, one double-compartment sink, one wall-mounted urinal, and one water heater tank. Within the Mechanical Building (Building 005), 2 single-walled, 275-gallon steel tanks and 2 water pumps would be demolished. Also located on the site, is a fuel spill container which would need to be demolished, as well as the pavement, concrete, and curbs associated with the container. In addition, the mooring system that is located on the aerostat pad would also need to be demolished (Appendix B, pages B-37 and B-38, photographs 71 through 73).

Any utility systems found on the Morgan City, LA TARS Site would also be demolished. For example, the 38 telephone/power poles and their associated high-pressure sodium fixtures would be removed from the exterior lighting areas. All primary and secondary underground distribution lines would be demolished, including any underground electric duct banks or armored cables. All water and sewer piping and fittings would be removed, as well as any metal drainage piping associated with the storm drainage system. The security alarm system would also be discarded.

Additional items that would be removed include all radio towers, the security fence (including removal of chain-link posts, fabric, and barbed wire), conduits or cables associated with the telephone duct facility, aluminum street signs, the entrance billboard, the emergency electric power generation plant, the diesel storage tank, all sewage septic tanks, and any pavements, roads, sidewalks, parking lots, concrete pads, curbs and gutters, or underground storm sewers.

During demolition activities, a silt fence would be installed. A silt fence is a temporary sediment barrier made of synthetic filtration fabric supported by steel or wood posts. The purpose of a silt

fence is to prevent sediment carried by sheet flow from leaving the site and entering a drainage way or storm drainage system by slowing storm water runoff and causing the deposition of sediment at the structure. In addition, seeding of the entire site, within the security fence, would be accomplished. The seeding mixture will be selected by the local County Government.

### 2.2.2 RESTORATION ACTIVITIES

Prior to construction of the Morgan City, LA TARS Site, a soil analysis was performed on the subject site. Appendix H contains a copy of this analysis. According to the site lease (Lease CS-I-92-012):

> "Upon termination of this Lease, and the removal of any and all such improvements, the Government or the Lessor shall perform, at the Government's expense, a similar soil analysis to determine the suitability of the soil for growing sugar cane or other commercial crops. In the event the soil is not suitable for growing sugar cane or other commercial crops, and it has been proven to be [solely] caused by the acts or omissions of the Government, the Government shall be responsible for restoring the condition of the soil as nearly as practicable to its original condition as of the Commencement Date of this Lease, in accordance with the provisions of the Federal Torts Claims Act, and the U.S. Government Lease for Real Property and its attachments GSA Forms 3517 and 3518."

Therefore, upon implementation of Alternative A, a soil analysis would be performed to ensure the soil is suitable for growing sugarcane or other commercial crops. If the soil is unsuitable, then the Government would restore the soil to its original condition, or as similar as possible.

Under implementation of Alternative A, all facilities and structures will be demolished on the Morgan City, LA TARS Site. Therefore, suitable soil would be brought in to fill the open areas where each structure was removed. Table 2-1 shows each facility/structure, its components, and the calculated cubic feet of soil that would be needed as back fill.

**Table 2-1**
**Soil Needed as Backfill Following Demolition of the TARS Site**

| Facility/Structure | Component | Dimensions | Cubic Feet |
|---|---|---|---|
| Operations Building | Foundation | 60' x 60' x 0.66' | 638.4 |
| Vehicle Maintenance Building | Foundation | 30' x 40' x 0.5' | 500 |
| Payload Service Building | Foundation | 60' x 50' x 0.5' | 1,500 |
| Security Building | Foundation | 20' x 10' x 0.66' | 132 |
| Mechanical Building | Foundation | 16' x 10' x 0.5' | 80 |
| Hazardous Waste Building | Foundation | 12' x 8' x 0.5' | 48 |
| Electrical Power Station | Foundation | 29.83' x 15.66' x 0.5' | 165 |
| Fuel Spill Container | Concrete Containment | 41.5' x 3' x 0.5' | 84 |

| Facility/Structure | Component | Dimensions | Cubic Feet |
|---|---|---|---|
| | | 14.5' x 3' x 0.5' | |
| Roads | Concrete | 72,693 SF x 0.5' | 36,346.5 |

Following demolition, restoration activities would be accomplished at the Morgan City, LA TARS Site. This would include grading the site to tie into the existing drainage contours. To remediate the earth, fine grading for loam or topsoil would take place. Fine grading is precise grading of ground after rough levels have been reached, to prepare for seeding and planting. In addition, seeding of the entire site within the security fence would be accomplished.

## 2.3 ALTERNATIVE B

Under this alternative, the Government proposes to purchase the property formerly used as the Morgan City, LA TARS Site at fair market value. Fair market value is an estimate of the marked value of a property, based on what a knowledgeable, willing, and unpressured buyer would probably pay to a knowledgeable, willing, and unpressured seller in the real estate market.

The USAF would perform a land acquisition process to secure the property through fee title acquisition. Fee title acquisition acquires the land in fee title through donation, bargain sale, or outright purchase.

## 2.4 ALTERNATIVE C

Under this alternative, the USAF proposes to acquire the property formerly used as the Morgan City, LA TARS Site from the landowner through land condemnation. Land condemnation involves the AF acquiring the property for the purpose of public use upon payment of "just compensation." "Just compensation" must be based on the fair market value of the property, taking into account its highest and best use, not necessarily its current use.

## 2.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Under Alternative D (No-Action Alternative), the AF would continue to maintain the facility in caretaker status. The AF would continue leasing the property from Glencoe-Vacherie Plantation, LTD (St. Mary Parish, LA). Caretaker status at the Morgan City, LA TARS Site includes the basic custodial services required to maintain the site at a level that provides safety, security, and environmental protection. This includes maintaining the grounds, ensuring the site and facilities are properly secured, and performing weekly inspection visits to determine the site's condition.

## 2.6 REGULATORY COMPLIANCE

This Environmental Assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, (42 United States Code 4321-4347), Council of Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and 32 CFR Part 989, et seq., *Environmental Impact Analysis Process* (formally known as Air Force Instruction 32-7061). The purpose of an EA is to evaluate the significance of any potential environmental effects that may result from implementing the

Proposed Action or alternatives. If the effects are not judged significant according to Council on Environmental Quality (CEQ) criteria, a Finding of No Significant Impact (FONSI) can be issued and the Proposed Action can proceed. If the EA finds that significant environmental effects may occur with project implementation, an Environmental Impact Statement (EIS) must be prepared. Following project implementation, any environmental effects must be mitigated to significance or insignificance.

As defined in CEQ regulations (40 CFR 1508.27), significance refers to both context and intensity. Context means that the significance of an action must be analyzed in several contexts, such as national, regional, and local. Significance varies with the setting of the action and both short- and long-term effects are relevant. Intensity refers to the severity of the effect. The following should be considered in evaluating intensity:

- Effects may be both beneficial and adverse (a significant effect may exist even if, on balance, the effect is beneficial);
- The degree to which the Proposed Action affects public health or safety;
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- The degree to which the effects on the quality of the human environment are likely to be highly controversial;
- The degree to which the action may establish a precedent for future actions with significant effects;
- Whether the action is related to other actions with individually insignificant, but cumulatively significant effects;
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP);
- The degree to which the action may adversely affect an endangered or threatened species or habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973; and
- Whether the action threatens a violation of federal, state, or local law.

If the environmental effects are found to be significant according to the CEQ criteria (and cannot be avoided or mitigated), an EIS must be prepared. The evaluative process outlined above is designed to inform the decision maker about the potential environmental consequences of their actions. As a predecisional tool to provide input on the relative merits of a Proposed Action (or alternatives), the preparation of an EA or EIS is required prior to taking the action.

## 2.7 PERMIT REQUIREMENTS

Under the Proposed Action, no permits are required for the transfer of property to the landowner.

Permits and actions required for demolition of the facility, implemented under Alternative A, are summarized below:

**Table 2-2**
**Permits and Actions Required for Demolition of the Morgan City, LA TARS Site**

| Utility/Entity | Permit Requirements | Actions Required |
|---|---|---|
| Wastewater Treatment Plant | None | If not already emptied, the plant must be emptied prior to removal. |
| Electricity | None | There is one transformer onsite that is not owned by the AF. This transformer is owned by Cleco Utility Group, Inc. This company should be contacted prior to any action. An appointment must be made for consultation on the removal of the transformer. The actions needed and cost for removal are established at the time of the appointment. |
| Phone | None | Service has been disconnected; no further action required. |
| Septic System | None | Septic system must be pumped out by a septic system pumper. |
| Federal Aviation Administration (FAA) | Restricted Airspace R-3807 | Contact FAA regarding airspace restriction changes. |
| Environmental Protection Agency (EPA)/ Louisiana Department of Environmental Quality (LDEQ) | None, but have registration with EPA as Conditionally Exempt Small Quantity Generator (CESQG) | Contact EPA regarding cancellation of permit (CESQG ID: LAR000049536) |
| U.S Fish and Wildlife Service (USFWS) | None | The Morgan City, LA TARS Site is located within threatened Louisiana black bear critical habitat. If implementation of Alternative A is to occur, further consultation with the USFWS is necessary. |

Any permits required for demolition of the site are under the responsibility of the demolition contractor to obtain, including any air permits or building permits that may be necessary.

There are no permits required for implementation of Alternatives B, C, or D (No-Action Alternative).

## 2.8 COMPARISON OF ALTERNATIVES

Table 2-3 provides a summary of the effects of implementing each alternative.

**Table 2-3**
**Comparison of Alternatives**

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| Land Use, Visual Resources, and Recreation | • *Proposed Action*: No significant effects to land use or recreation at the site or surrounding land; however, land use would change since the landowner would resume control of the site, and the site would no longer be used for military purposes. No significant effects to visual resources would occur.<br>• *Alternative A*: No significant effects to land use or recreation at the site or adjacent areas; however, it is possible for the site to return to its previous use as a sugarcane plantation following demolition and restoration. In addition, land use would change since it would no longer be used for military purposes. Temporary, short-term effects to visual resources would occur during demolition of the site.<br>• *Alternative B*: No significant effects to land use, visual resources, and recreation would occur.<br>• *Alternative C*: No significant effects to land use, visual resources, and recreation would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Socioeconomics and Environmental Justice | • *Proposed Action*: Slight, negative effect to socioeconomics due to the contract maintenance and security personnel's loss of jobs; however, this effect in considered negligible. No significant effects to environmental justice would occur.<br>• *Alternative A*: Beneficial, short-term effect to socioeconomics due to creation of jobs during site demolition and restoration; however, these effects are considered negligible and short-term. No significant effects to environmental justice would occur.<br>• *Alternative B*: No significant effects to socioeconomics or environmental justice would occur.<br>• *Alternative C*: No significant effects to socioeconomics or environmental justice would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Cultural Resources | • *Proposed Action*: No significant effects to cultural resources would occur.<br>• *Alternative A*: No significant effects to cultural resources would occur.<br>• *Alternative B*: No significant effects to cultural resources would occur.<br>• *Alternative C*: No significant effects to cultural resources would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Infrastructure | • *Proposed Action*: No significant effects to infrastructure would occur.<br>• *Alternative A*: Possible, temporary effect to traffic in the area during demolition and restoration activities; however, this effect is considered short-term. In addition, there would be a change to the infrastructure |

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| | since all buildings and infrastructure would be removed; however, this effect is considered insignificant.<br>• *Alternative B*: No significant effects to the infrastructure would occur.<br>• *Alternative C*: No significant effects to the infrastructure would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions |
| Physical Resources | • *Proposed Action*: No significant effects to the physical resources would occur.<br>• *Alternative A*: Temporary effect to soils during demolition activities would occur. Possible, temporary effects to surface water quality during demolition of the site from possible erosion contributing to turbidity of runoff and possible contamination from spills or leaks from construction equipment could occur. Erosion control best management practices (BMPs) should be followed to minimize and control erosion and discharge of sediment. Provided BMPs are utilized during demolition and restoration, any effect to surface water should be minimal.<br>• *Alternative B*: No significant effects to the physical resources would occur.<br>• *Alternative C*: No significant effects to the physical resources would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Hazardous Materials and Hazardous Waste | • *Proposed Action*: No change from current conditions.<br>• *Alternative A*: There would be no significant effects; any hazardous materials or waste present at the site would be disposed of under the requirements of CERCLA; any LBP discovered during demolition activities would be disposed of according to OSHA and RCRA regulations<br>• *Alternative B*: No significant effects to hazardous materials and waste would occur.<br>• *Alternative C*: No significant effects to hazardous materials and waste would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Biological Resources | • *Proposed Action*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative A*: Short-term, minimal effect to vegetation during demolition activities would occur. However, following restoration activities, the site would return to conditions similar to those that existed prior to construction of the site, which is considered a long-term, beneficial effect since the site's natural condition would be restored. Possible, short-term effect to wildlife species during demolition could occur; however, long-term effect would be beneficial |

| Resource Effects | Proposed Action and Alternatives |
|---|---|
| | to wildlife species since the site would be reseeded to its original state. Potential, adverse effect to the federally threatened Louisiana black bear's critical habitat could occur. Prior to implementation of this alternative, the USFWS would need to be contacted.<br>• *Alternative B*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative C*: No significant effects to vegetation, wildlife, wetlands, floodplains, or threatened and endangered species would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Air Quality | • *Proposed Action*: No significant effects to air quality would occur.<br>• *Alternative A*: Potential for temporary, localized effects to air quality during demolition from vehicle emissions and operation of machinery could occur. However, the amount of emissions would be negligible. Table 4-1 contains estimated air emission numbers.<br>• *Alternative B*: No significant effects to air quality would occur.<br>• *Alternative C*: No significant effects to air quality would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |
| Airspace | • *Proposed Action*: There would be an effect to the airspace since the Restricted Area R-3870 would no longer be needed.<br>• *Alternative A*: There would be an effect to the airspace since the Restricted Area R-3870 would no longer be needed.<br>• *Alternative B*: No significant effects to air space would occur.<br>• *Alternative C*: No significant effects to air space would occur.<br>• *Alternative D (No*-Action Alternative): No change from current conditions. |

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# 3.0 EXISTING CONDITIONS

## 3.1 LAND USE, VISUAL RESOURCES, AND RECREATION

### 3.1.1 DEFINITION OF THE RESOURCES

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity on a parcel. Properties of land can be categorized as residential, commercial, industrial, agricultural, institutional, recreational, etc. Visual resources are defined as the quality of the environment perceived through the visual sense only. Recreation refers to activities performed by humans that result in fun or pleasure. Some examples of recreational activities include fishing, hunting, skiing, etc.

### 3.1.2 LAND USE

The Morgan City, LA Tethered Aerostat Radar System (TARS) Site consists of 23.9 acres within a 253.88-acre tract of land. There are occupied residences within one-quarter mile to the southwest of the site. Immediately west of the site is an active railroad line and a charter school. A plantation company owns the land to the north, east, and south of the site. This land is primarily used as cropland and for growing sugar cane. Prior to the construction of the Morgan City, LA TARS Site, the property was used for growing sugar cane.

### 3.1.3 VISUAL RESOURCES

The Morgan City, LA TARS Site consists of 23.9 acres. The site includes the following buildings: Operations Building (Building 001), Vehicle Maintenance Building (Building 002), Payload Service Building (Building 003), Security Building (Building 004), Mechanical Building (Building 005), Hazardous Waste Building (Building 006), and Electrical Power Station Building (Building 045). All of these structures are located on the southern portion of the site. The central portion consists of the concrete circular launching pad and mooring system for the aerostat. Appendix B contains photographs of the Morgan City, LA TARS Site.

### 3.1.4 RECREATION

The Morgan City, LA TARS Site is in cold storage and employs no personnel except contract grounds maintenance and security personnel. In addition, this site is closed off to the public. No recreational activities are currently present at the site.

## 3.2 SOCIOECONOMICS, DEMOGRAPHICS, AND ENVIRONMENTAL JUSTICE

### 3.2.1 DEFINITION OF THE RESOURCES

### 3.2.2 SOCIOECONOMICS

Socioeconomics is defined as the study of the relationships between economic activity and social life. Economic activity encompasses the economically active population, including persons that furnish the supply of labor for the production of economic goods and services. The production of economic goods and services includes all production and processing of primary products whether for their market, for their barter, or for their own consumption. Economic activity affects employment, personal income, and industrial or commercial growth. When these areas are affected, other components are often affected, including housing availability and the provision of public services. Socioeconomic data is available at the county, state, and national levels. This data shows trends of socioeconomic conditions present at each level (Tables 3-1 and 3-2).

### 3.2.3 DEMOGRAPHICS

Demographics are statistical data that describes the makeup of a given area and includes information such as age range, gender, education levels, and average household income. Demographic data is important when evaluating a Proposed Action. The socioeconomic data shown in this chapter is present at the parish and state level. The data was collected from previously published documents issued by federal, state, and local agencies and from state and national databases.

### 3.2.4 ENVIRONMENTAL JUSTICE

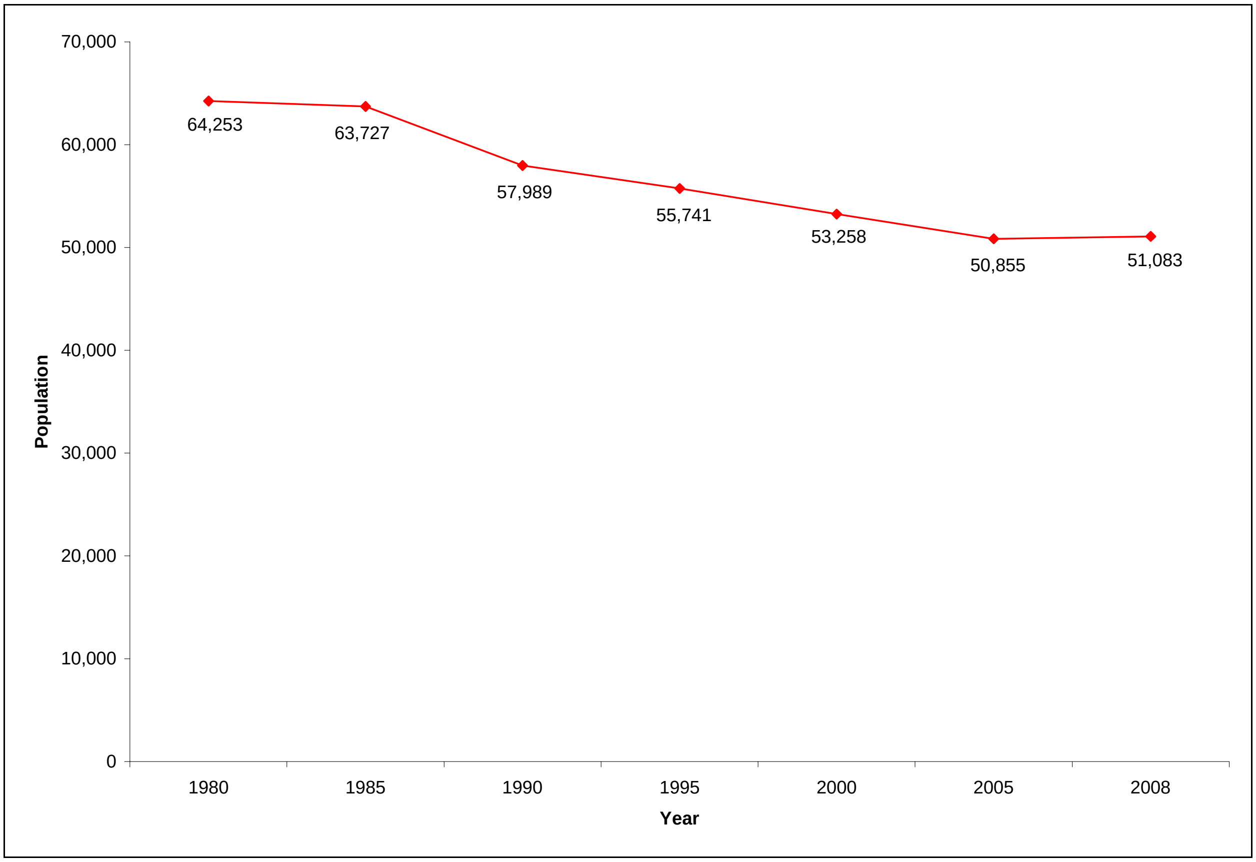
According to the Environmental Protection Agency's (EPA) Office of Environmental Justice, environmental justice is defined as follows:

> "Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."

In 1994, Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued. This EO requires that federal agencies make achieving environmental justice part of their mission. In addition, the EPA has identified environmental justice as a key priority. EO 12898 was issued to ensure the fair treatment of all individuals, regardless of their race, national origin, or income, with respect to the development and enforcement of environmental laws, regulations, and policies.

## 3.2.5 EXISTING CONDITIONS OF SOCIOECONOMICS, DEMOGRAPHICS, AND ENVIRONMENTAL JUSTICE RESOURCES

*Population.* The Morgan City, LA TARS Site is located within St. Mary Parish and is approximately 40 miles west of Morgan City, Louisiana, near the rural community of Glencoe. In 2008, Louisiana had an estimated population of 4,410,796 persons and St. Mary Parish had an estimated population of 51,083 persons. It is estimated that St. Mary Parish experienced a 4.08 percent decrease in its population since July 2000 (U.S. Census Bureau 2009). Figure 3-1 provides the population trend data for selected years in St. Mary Parish.




*Source: U.S. Census Bureau, November 20, 2009*

**Figure 3-1**
**Population of St. Mary Parish in Various Years**

*Employment.* The Morgan City, LA TARS Site is deactivated and employs no personnel, except contract grounds maintenance and security personnel. Table 3-1 shows the type of employment by industry for St. Mary Parish and the state of Louisiana. A large portion of Louisiana and St. Mary Parish residents are employed in the education, health, and social service trade. In 2009, St. Mary Parish experienced an unemployment rate of 7.1 percent, which slightly increased from the 6.9 percent rate seen in 2000 (U.S. Census Bureau).

**Table 3-1**
**Employment by Industry in St. Mary Parish and the State of Louisiana**

| Employment by Industry | Louisiana | St. Mary Parish |
|---|---|---|
| Agriculture, Forestry, Fishing, Hunting, and Mining | 4.2% | 8.8% |
| Construction | 7.9% | 8.7% |
| Manufacturing | 10.1% | 12.2% |
| Wholesale Trade | 3.5% | 3.0% |
| Retail Trade | 11.9% | 11.4% |
| Transportation, Warehousing, and Utilities | 5.3% | 6.7% |
| Information | 2.0% | 1.5% |
| Finance, Insurance, Real Estate, Rental, and Leasing | 5.7% | 4.8% |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 7.6% | 6.1% |
| Educational, Health Care, Social Services | 21.7% | 16.9% |
| Arts, Entertainment, Recreation, Accommodation, and Food Services | 9.1% | 10.0% |
| Other Services (Except Public Administration) | 5.2% | 5.3% |
| Public Administration | 5.8% | 4.5% |

*Source: U.S. Census Bureau, 2000*

*Environmental Justice.* To successfully evaluate environmental justice issues, information on race and poverty characteristics is needed. This information can be found for St. Mary Parish and the state of Louisiana in Table 3-2.

**Table 3-2**
**Race and Poverty Characteristics of St. Mary Parish and the State of Louisiana**

| Characteristics | Louisiana | St. Mary Parish |
|---|---|---|
| Total Population | 4,410,796 | 51,083 |
| % White | 61.9% | 60.5% |
| % Black or African American | 32.0% | 32.5% |
| % American Indian, Eskimo, or Aleut | 0.6% | 1.6% |
| % Asian | 1.4% | 1.4% |
| % Native Hawaiian and Other Pacific Islander | <0.05% | <0.05% |
| % Hispanic or Latino | 3.4% | 3.2% |
| % Other | 1.1% | 1.3% |
| % Families Below Poverty | 18.8% | 22.4% |
| Median Household Income | $40,866 | $36,109 |

*Source: U.S. Census Bureau, 2007-2008*

## 3.3 CULTURAL AND HISTORICAL RESOURCES

### 3.3.1 DEFINITION OF THE RESOURCES

Cultural resources are typically divided into three major categories: archaeological resources (prehistoric or historic), architectural resources, and traditional cultural properties.

- *Archaeological resources* consist of the physical remains of past human activity. The scientific study of these remains is essential to the understanding and appreciation of prehistoric and historic cultural development. Prehistoric refers to any time or object that predates recorded history, while historic refers to any time or object of the past after written record.
- *Architectural resources* are those standing structures that are usually over 50 years of age and are of significant historic or aesthetic importance to be considered for inclusion in the National Register for Historic Places (NRHP).
- *Traditional cultural properties* are properties or places that are eligible for inclusion on the NRHP because of their association with cultural practices or beliefs that are (1) rooted in the history of a community, and (2) are important to maintaining the continuity of that community's traditional beliefs and practices.

### 3.3.2 CULTURAL AND HISTORICAL SETTING

A cultural resource survey, titled "Level I Cultural Resource Survey of 22.349 Acres in St. Mary Parish, LA," was conducted for the Morgan City, LA TARS Site, prior to its construction. Results of this survey conclude that there are no cultural resources present at the Morgan City, LA TARS Site due to the poor permeability of the lower matrix of soil. Appendix H provides a copy of this survey.

*Paleo-Indian (18,000 – 8,000 B.C.).* Paleo-Indian cultural manifestations are thought to have been present in Louisiana as early as 10,000 to 8,000 B.C. The use of lithic technologies, such as large lanceolate fluted points and unifacially or bifacially flaked scrapers recovered in surface collections almost exclusively classify this cultural period. Only four Paleo-Indian sites are recognized in the general region of the Morgan City, LA TARS Site.

*Archaic (8,000 – 1,000 B.C.).* Archaic cultural manifestations include more specialized lithic technologies since subsistence strategies shifted to accommodate an expanded demographic base. For example, projectile points progressed from notched to beveled varieties. In addition, polished stone, bone, and shell tools were created during this period and the atlatl began to be used. Due to the shellfish economy during this period, a late Archaic riverine occupancy was also developed. There are approximately 40 Archaic sites in the general region of the Morgan City, LA TARS Site. However, most of these sites remain poorly defined.

*Formative (2,000 B.C. – 500 A.D.).* This period is considered the transitional period between the pre-ceramic and the ceramic cultural traditions on the Gulf Coastal Plains. Cultural manifestations exhibited in this period include the establishment of a trade network for the acquisition of steatite vessels, the introduction of fiber-tempered pottery, the exploitation of delta

environments, the development of a social organization that was elaborate enough to build one of the earliest mound complexes, and the continued reliance on a subsistence economy. There are approximately 52 Formative sites in the general region of the Morgan City, LA TARS Site.

*Woodland (1,000 B.C. – 1,000 A.D.).* The primary cultural manifestation associated with this period is the widespread use of ceramics with a progression of different tempering agents. This period exhibits extreme regional variations throughout Louisiana. However, the Marksville and Troyville-Coles cultures are the most common near regions of the Morgan City, LA TARS Site.

*Mississippian (900 – 1,500 A.D.).* The cultural manifestations that mark this period include the introduction of elaborately decorated shell-tempered ceramics, platform mounds, a stratified social organization, and agriculture. Within the general vicinity of the Morgan City, LA TARS Site, the indigenous Plaquemine culture existed. There are approximately 83 Plaquemine sites that have been recorded near the Morgan City, LA TARS Site.

*Protohistoric (1,500 – 1,650 A.D.).* Surrounding the Morgan City, LA TARS Site, the Chitimacha and the Attakapas are the earliest recorded Native Americans to occupy the general region. The Chitimacha were reported living along Bayou Lafourche when the French made contact. They were driven to the west by the French in 1706 and resettled in several villages along Bayou Teche near Charenton Beach. The Attakapas inhabited southwestern Louisiana from Bayou Teche to Texas. European settlement initially encroached upon and eventually dispersed these historic tribes. There are eight Protohistoric sites reported in the general area of the Morgan City, LA TARS Site.

*Historic (1,650 – Present).* European contact near the Morgan City, LA TARS Site was initiated through the exploration and colonization efforts of the French. While the French Colonial Period did not see any significant settlement in the area, the Spanish acquisition of Louisiana in 1763 brought an influx of Acadians and Blacks into the region.

During the Antebellum Period (1,789 – 1,849), Joseph Sorrel established a sugarcane plantation in 1811 on 600 (599.17 acres) arpents along Bayou Cypremort within the Morgan City, LA TARS Site. While no specific records exist concerning this plantation, several studies have discussed the historic period of the project area.

### 3.3.3 EXISTING CONDITIONS OF CULTURAL AND HISTORICAL RESOURCES

Prior to the construction of the TARS Site, the property was used for growing sugar cane. Interviews with Mr. Will Terry (property manager for the site and surrounding lands at the time) indicated that his family had used the land since at least 1946 for growing sugar cane. In addition, the cultural resources survey (Appendix H) conducted for this site references a Mr. Joseph Sorrell as having established sugar plantations in 1811 on tracts along the Bayou Cypremont. This bayou is located approximately 500 feet west of the Morgan City, LA TARS Site.

According to the Louisiana Department of Historic Preservation, no known historic properties exist at the site (Appendix A).

## 3.4 INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES

### 3.4.1 DEFINITION OF THE RESOURCE

Infrastructure is defined as the basic physical and organizational structures needed for the operation of a society or enterprise. Infrastructure also consists of the facilities and services necessary for an economy to function. Infrastructure typically consists of physical structures that support a specific area. For example, roads, water supply, sewers, power grids, and telecommunications are all systems of infrastructure. The infrastructure information provided in this chapter includes an overview of each infrastructure component and a description of its existing condition.

### 3.4.2 TRANSPORTATION

Methods of transportation at the Morgan City, LA TARS Site consist of a paved road off Louisiana State Highway 83 that serves as an entryway to the site. In addition, concrete is present from the Site entranceway towards and surrounding the buildings to allow for vehicle transportation. Since the Morgan City, LA TARS Site is closed, transportation does not currently exist at the site.

### 3.4.3 UTILITIES (ELECTRICITY, WATER, SEPTIC SYSTEM, ETC)

*Power Supply.* Since the TARS Site is in cold storage, there is no power supply available to the site. However, prior to deactivation of the site, electricity services were provided by Cleco Utility Group, Inc, based out of Franklin, Louisiana. There are four transformers onsite, one located in each of the following areas: Operations Building (Building 001), Generator Enclosure, Tether Mooring Building, and on the southeastern corner of the site (Appendix B, pages B-5, B-34, and B-43, Photographs 8, 65, 83, and 84). The transformer located on the southeastern corner of the site is owned by Cleco Utility Group, Inc; the remaining three transformers are owned by the USAF. Cleco Utility Group, Inc would need to be contacted under implementation of Alternative A to remove this transformer and their services from the facility.

*Water Supply.* When the site was operational, St. Mary Parish Water and Sewer Commission No. 5 provided water to the site. St. Mary Parish Water and Sewer Commission No. 5 owns and operates two wells located immediately adjacent to the site, which were used to supply water to the site. This water was stored in a 20,000-gallon steel water tank that is located on the southeastern section of the site (Appendix B, page B-31, Photograph 60). The tank was used to store water for non-potable use and in case of fire. However, due to problems with insufficient chlorination, this water was not used as drinking water. Drinking water was provided to the site's personnel in the form of bottled water. In 2004, when the site was deactivated, this water tank was drained.

*Sewer and Wastewater Systems.* The Morgan City, LA TARS Site contains a 1,000-gallon wastewater treatment plant to dispose of sewage and wastewater (Appendix B, page B-35, Photograph 68). This plant is located north of the Operations Building (Building 001) and is

manufactured by Delta Process Equipment, Inc. The tank consists of a steel, in-ground tank with an aeration/sedimentation chamber, a clarification/skimming chamber, and an effluent/chlorination chamber. In March 2004, when the site was deactivated, Franklin Portable Potties emptied the wastewater treatment plant and deactivated the system. Under implementation of Alternative A, the plant should be pumped empty if any residual waste is found.

*Natural Gas.* There is no natural gas being provided to the site since it is currently in cold storage. However, gas lines and electrical meters are located at the property. These would need to be removed if Alternative A is implemented.

*Communications.* Phone and internet services are not available at the site since the site is in cold storage.

*Solid Waste Management.* Solid waste is not currently being accumulated at the site since the site is not operational and employs no personnel. The contract personnel that provide ground maintenance and security haul out any waste that they generate while onsite. However, prior to deactivation, Waste Management, Inc, based out of Acadiana, Louisiana, was contracted to remove solid waste from the facility.

## 3.5 PHYSICAL RESOURCES

### 3.5.1 DEFINITION OF THE RESOURCE

Physical resources include geological and water resources.

*Geological Resources.* Geological resources consist of materials of the Earth's surface and subsurface. Most commonly, these resources are described in terms of topography, physiography, geology, soils, and where applicable, geologic hazards and paleontology. Topography and physiography refer to the study of the Earth's surface shape and features, as well as the description of these shapes and features. More specifically, topography involves the relief or terrain of an area, the three-dimensional quality of the surface, and the identification of specific landforms. Physiography is the systematic description of nature in general.

Geology is the study of the origin, history, and structure of the earth. In addition, it includes the study of organisms that have inhabited Earth in the past. An important part of geology is the study of how Earth's materials, structures, processes, and organisms have changed over time.

Soils are the unconsolidated mineral or organic materials on the immediate surface of the earth that serve as natural mediums for the growth of land plants. Soil is made up of particles of broken rock that have been chemically and environmentally altered through various processes, such as weathering and erosion. Various factors that affect the formation of soils include parent materials, climate, topography, biological factors, and time. The United States Department of Agriculture (USDA) and the National Cooperative Soil Survey (NCSS) provides an elaborate classification of soil types according to several parameters.

*Water Resources.* Water resources are sources of water that are useful or potentially useful to humans. For example, groundwater and surface water are water resources.

Groundwater is the water located beneath the surface of the earth, within soil pore spaces, and in the fractures of lithologic formations. The water table is the level at which groundwater pressure is equal to atmospheric pressure. This occurs at the depth in which the soil pore spaces or fractures become completely saturated with water. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers. Groundwater is often used for agricultural, municipal, and industrial uses through the construction of wells.

Surface water is any water that has collected on the ground or is in a stream, river, lake, wetland, or ocean. Surface water is also replenished through precipitation and is naturally lost through evaporation and subsurface seepage into the groundwater.

Stormwater is a form of surface water that occurs when water originates during precipitation events. Any stormwater that does not soak into the ground becomes surface runoff. Stormwater is of important concern because of flood control and water pollution. When stormwater falls on impervious surfaces (parking lots, roads, buildings, compacted soils, etc) it cannot soak into the ground, thus creating runoff. Runoff can cause many problems, including the erosion of watercourses and flooding. In addition, daily human activities result in the deposition of pollutants on roads, lawns, roofs, farm fields, etc. Therefore, when stormwater results in runoff, pollutants have the potential to be introduced into the surface water.

The Clean Water Act (CWA) (USC 33 1251 et seq) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. by regulating quality standards for surface waters. The CWA makes it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit is obtained. EPA’s National Pollutant Discharge Elimination System (NPDES) controls discharges. NPDES regulates the discharge of point (pipe, manufactured ditch, etc) and nonpoint (stormwater) sources of water pollution.

### 3.5.2 GEOLOGICAL RESOURCES

*Topography and Physiography.* The Morgan City, LA TARS Site is located within the Mississippi Alluvial Plain Ecoregion. Within this plain, the site lies within the Mississippi River Delta. Topography in the area consists of broad, flat, alluvial plains. In addition, the site slopes very gently to the east from the railroad easement located parallel to the site to the west. The elevation of the site is approximately two meters above sea level, in a flat area west of Louisiana State Highway 83. Scott Canal and Kelley Canal are located approximately 0.5 and 1.5 miles, respectively, to the east of the site. These canals discharge further south into other existing canals and eventually make their way into the Intracoastal Waterway.

*Geology.* The surface geology of St. Mary Parish consists of deltaic and alluvial landforms created by the Mississippi and Red Rivers. Sediments deposited by these rivers during the Late Pleistocene or Holocene epochs, underlie the surface of this parish. Based on physiography and alluvial and deltaic landform, St. Mary Parish can be differentiated into four different regions as follows: (1) swamps and lakes of the Atchafalaya Basin, (2) the course and natural levees of

Bayou Teche, (3) small fragments of Pleistocene alluvial plain, and (4) the partially submerged deltaic plain of the Teche Delta Lobe.

The Morgan City, LA TARS Site is located within the partially submerged deltaic plains of the Teche Delta Lobe. This delta lobe consists of coastal marshes that extend approximately 8 to 12 miles from the gulf. These marshes are frequently flooded by tides and overflow from the many lakes, bayous, and canals. Water is on or near the surface of the soil much of the year.

The Teche Delta Lobe is the oldest delta lobe of the Mississippi Delta that remains above sea level. It was created by the Mississippi River when it occupied the present course of Bayou Teche (approximately 4,500 to 6,000 years ago). During this time, the Mississippi River deposited fine-grained deltaic sediment as a thin seaward thickening prism of deltaic sediments over older Holocene deltaic sediments and loess-covered Pleistocene alluvial deposits to create the Teche Delta Lobe. These deltaic sediments consist of gray to black interbedded soft, organic-rich clays, mucks, and peat that grade downward into soft gray clays containing silt lenses and brackish water to marine shells.

*Soils.* Soil is a natural, three-dimensional body that forms on the earth’s surface. It has properties resulting from the integrated effect of climate and living matter acting on parent material, as conditioned by relief over time. Considered individually, the five factors of soil formation are (1) parent material, (2) climate, (3) plants and animal life, (4) relief, and (5) time.

There are three soil components present at the Morgan City, LA TARS Site: (1) Loreauville, (2) Galvez; and (3) Iberia. Tables 3-3 through 3-5 list various characteristics of each of these soil components.

**Table 3-3**
**Characteristics of the Loreauville Soil Component**

| **Component Description** | |
|---|---|
| Major Land Resource Area (MLRA) | 131A: Southern Mississippi River Alluvium |
| Landform | Teche Natural Levee on Delta Plain |
| Hillslope Position | Convex Toeslope |
| Parent Material | Loamy Alluvium |
| Slope | 0-1 Percent |
| Depth to Restrictive Feature | None |
| Drainage Class | Somewhat Poorly Drained |
| Slowest Saturated Hydraulic Conductivity | Moderately Slow (About 1.41 micrometers/seconds) |
| Available Water Capacity | Very High (about 13.0 inches) |
| Shrink-Swell Potential | Moderate (about 4.5 linear extensibility percentage [LEP] |
| Flooding Hazard | None |
| Ponding Hazard | None |
| Depth to Seasonal Water Saturation | Apparent, from a depth of 12 to 30 inches, during December to April |

| | |
|---|---|
| Runoff Class | Medium |
| Ecological Site | Not assigned |
| Nonirrigated Land Capability | 2wi |
| **Typical Profile** | |
| Surface Layer<br>0 to 5 inches | <br>Very dark, gray, silt loam |
| Subsurface Layer<br>5 to 10 inches | <br>Very dark, grayish-brown, silty-clay loam |
| Subsoil Layer<br>10 to 20 inches<br>20 to 30 inches<br>30 to 42 inches<br>42 to 57 inches | <br>Grayish-brown, silty-clay loam<br>Light brownish-gray, silt loam<br>Light brownish-gray loam<br>Olive gray loam |
| Substratum Layer<br>57 to 65 inches<br>65 to 80 inches | <br>Gray loam<br>Gray, very fine, sandy loam |
| **Use and Management** | |
| Major Land Uses<br>Other Features<br>Thickness | Cropland and Pastureland<br>None<br>2 to 15 inches |

*Source: Soil Survey of St. Mary Parish, Louisiana (2001).*

**Table 3-4**
**Characteristics of the Galvez Soil Component**

| **Component Description** | |
|---|---|
| MLRA | 131A: Southern Mississippi River Alluvium |
| Landform | Teche Natural Levee on Delta Plain |
| Landform Position | Convex Areas |
| Parent Material | Loamy Alluvium |
| Slope | 0-1 Percent |
| Depth to Restrictive Feature | None |
| Drainage Class | Somewhat Poorly Drained |
| Slowest Saturated Hydraulic Conductivity | Moderately Slow (about 1.41 micrometers/seconds) |
| Available Water Capacity | Very High (about 12.6 inches) |
| Shrink-Swell Potential | Moderate (about 4.5 LEP) |
| Flooding Hazard | None |
| Ponding Hazard | None |
| Depth to Seasonal Water Saturation | Apparent, from a depth of 18 to 36 inches, December to April |
| Runoff Class | Medium |
| Ecological Site | Not Assigned |
| Nonirrigated Land Capability | 2w |
| **Typical Profile** | |
| Surface Layer | |

| | |
|---|---|
| 0 to 8 inches | Dark, grayish-brown, silt loam |
| Subsoil Layer<br>8 to 17 inches<br>17 to 83 inches | <br>Brown and grayish-brown, silty-clay loam<br>Grayish-brown, silt loam |
| Substratum Layer<br>83 to 91 inches | <br>Grayish-brown, silty clay |
| **Use and Management** | |
| Major Land Uses | Cropland, urban, and residential |

*Source: Soil Survey of St. Mary Parish, Louisiana (2001).*

**Table 3-5**
**Characteristics of the Iberia Soil Component**

| **Component Description** | |
|---|---|
| MLRA | 131A: Southern Mississippi River Alluvium |
| Landform | Backswamp on Delta Plain |
| Landform Position | Linear Areas |
| Parent Material | Clayey Alluvium |
| Slope | 0-1 Percent |
| Depth to Restrictive Feature | None |
| Drainage Class | Poorly Drained |
| Slowest Saturated Hydraulic Conductivity | Very Slow or Impermeable |
| Available Water Capacity | High (about 10.0 inches) |
| Shrink-Swell Potential | Very High (about 17.0 LEP) |
| Flooding Hazard | Rare, during December to April |
| Ponding Hazard | None |
| Depth to Seasonal Water Saturation | Apparent, from the surface to a depth of 24 inches, during December to April |
| Runoff Class | Low |
| Ecological Site | Not Assigned |
| Nonirrigated Land Capability | 3w |
| **Typical Profile** | |
| Surface Layer<br>0 to 17 inches | <br>Black clay |
| Subsoil Layer<br>17 to 37 inches<br>37 to 60 inches | <br>Olive-gray clay<br>Dark gray, silty-clay loam |
| Substratum Layer<br>60 to 80 inches | <br>Gray, silty-clay loam |
| **Use and Management** | |
| Major Land Uses | Cropland and urban |

*Source: Soil Survey of St. Mary Parish, Louisiana (2001).*

<u>Parent Material.</u> Parent material is the initial material from which soil forms. It affects the chemical and mineralogical composition of the soils. It also influences the degree of leaching, the reaction, texture, permeability, drainage, and the kind and color of the surface and subsoil

layers. Relative percentages of sand, silt, and clay in the parent materials affect the rate that water moves into and through the soil, and affects the soil's ability to hold organic humus, air, and soil nutrients in the rooting zone.

The soils in St. Mary Parish formed in either alluvial sediments or loess, and many have accumulations of organic material in the upper part. The alluvium is from distributary streams of former deltas of the Mississippi River. Bordering the stream channels are low ridges called natural levees. These levees are highest next to the channels and slope gradually into backswamps further from the channels. The levees are shaped by waters that overspread the streambanks. When the water slows, it first drops sand, then silt, and finally clay particles. Thus, the soils on the highest parts of natural levees generally formed from loamier parent materials. Galvez soils generally are near the crest of natural levees.

The soils on the lower part of the natural levees and in the backswamps beyond the natural levees generally formed from more clayey parent materials that were deposited by slowly moving water or stagnant backwater. Iberia soils formed from these types of parent material.

<u>Climate.</u> St. Mary Parish has a humid, subtropical climate, characteristic of areas near the Gulf of Mexico. This warm, moist climate promotes rapid soil formation. The seasonal variations in the temperature of the air affect the temperature of the soil within the rooting zone. Soils in St. Mary Parish generally have a mean annual temperature in the rooting zone that is more than 72 degrees Fahrenheit because of a relatively high average winter air temperature.

<u>Plant and Animal Life.</u> Plant and animal life includes plants, bacteria, fungi, and animals, and are important in the formation of soils. The native plants, and their associated complex communities of bacteria and fungi, generally have a significant influence on soil formation in St. Mary Parish. Animals, such as crawfish and earthworms also influence soil formation by mixing the soil. Man's activities, such as cultivating crops, channel construction, burning, draining, diking, flooding, paving, and land smoothing, affect the soil.

<u>Relief.</u> Relief and other physiographic features influence soil formation processes mainly by affecting internal soil drainage, runoff, erosion and deposition, salinity levels, and exposure to the sun and wind. In St. Mary Parish, sediment accumulated at a much faster rate than erosion took place. This accumulation of sediment has occurred at a faster rate than many of the processes of soil formation.

The land surface of most of the parish is generally level or nearly level. The slope is dominantly less than one percent. Slopes on the natural levees are long and extend from the highest elevation on natural levees along bayous or distributary channels down to an elevation that is several feet lower in the swamps and marshes.

<u>Time.</u> Time influences the kinds of horizons and their degree of development. A horizon is a specific layer or stratum of soil or subsoil in a vertical cross section of land. Long periods are generally required for prominent horizons to form. In general, the soils of St. Mary Parish formed in various kinds of parent material, ranging in age from the most recent deposits along

distributary channels and in swamps and marshes to the late Pleistocene sediments that form the core of the terrace uplands.

### 3.5.3 WATER RESOURCES

*Groundwater*. The principal water-yielding aquifer at the Morgan City, LA TARS Site is the Chicot Aquifer (Figure 3-2). The Chicot Aquifer System consists of fining upward sequences of gravels, sands, silts, and clays of the Pleistocene Prairie, as well as intermediate and high terrace deposits of southwestern Louisiana. The medium to coarse-grained sand and gravel aquifer units dip and thicken toward the Gulf of Mexico, thin slightly toward the west into Texas, and thicken toward the east where it is overlain by alluvium of the Atchafalaya and Mississippi rivers.

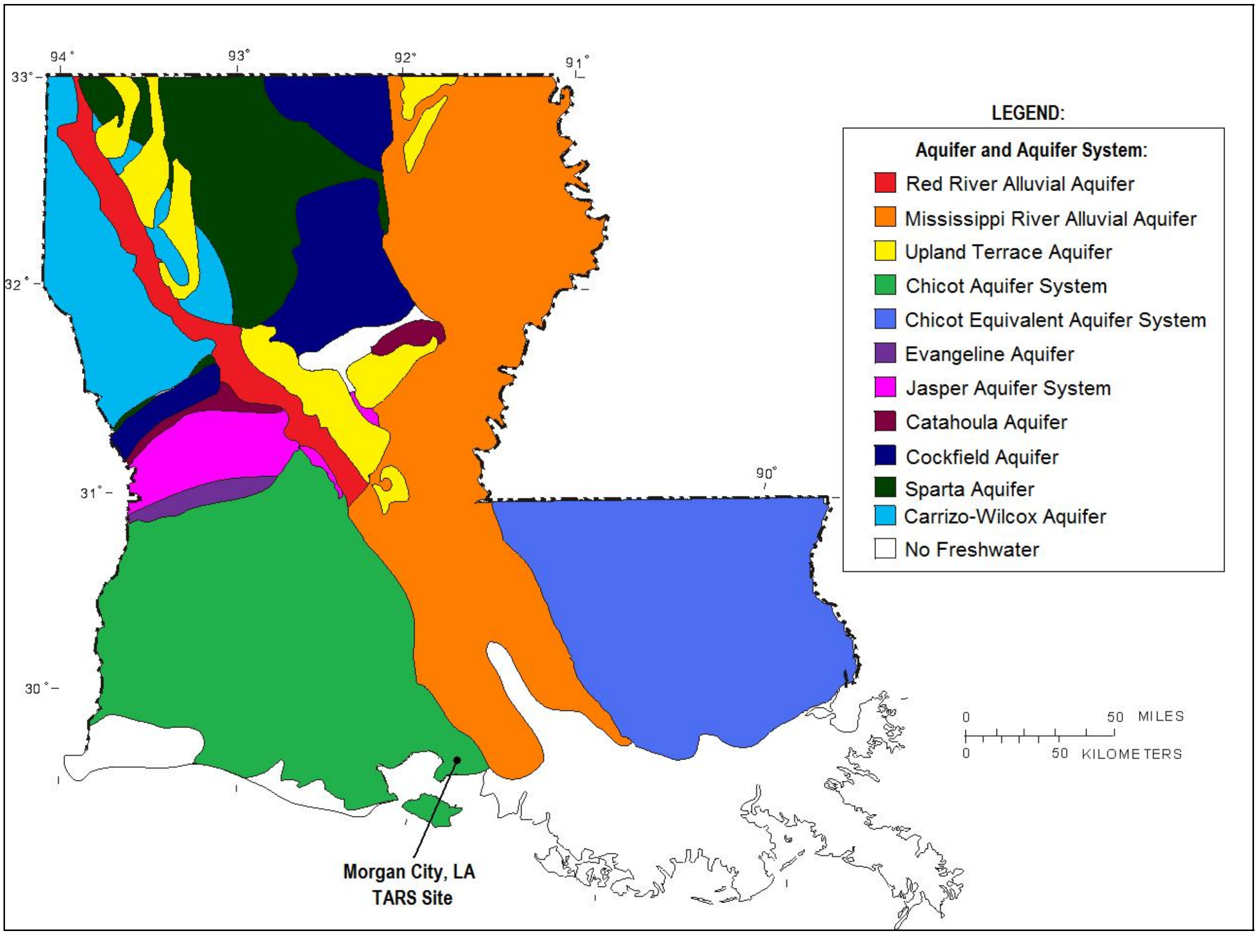
Recharge to the Chicot Aquifer occurs primarily through the direct infiltration of rainfall in the interstream, upland outcrop-subcrop areas. Recharge also occurs by water movement from the Atchafalaya alluvium, downward infiltration through the clays south of the primary recharge outcrop area, upward movement from the underlying Evangeline Aquifer, and inflow from the Vermilion and Calcasieu rivers. Water movement is generally toward the pumping centers at Lake Charles and Eunice. There is little movement of water from the west because of pumping water out of the aquifer in the Orange, Texas area. The hydraulic conductivity varies between 40 and 220 feet per day.

St. Mary Parish Water and Sewer Commission No. 5, owns and operates two wells that are located immediately adjacent to the Morgan City, LA TARS Site. When the site was active, these wells provided water to the site. Water pumped from these wells was chlorinated onsite and then stored in a 20,000-gallon above-ground storage tank (AST) for use. However, the site experienced problems in maintaining sufficient chlorination in the tank; therefore, this water was only used for non-potable use and in case of fires.

*Surface Water*. The Morgan City, LA TARS Site is located within the Atchafalaya River Basin (Figure 3-3). The Atchafalaya Basin is the largest swamp in the U.S. and is located in south-central Louisiana. It is a combination of wetlands and river delta areas, where the Atchafalaya River and the Gulf of Mexico converge. The Atchafalaya River Basin is unique among basins because it has a growing delta system with nearly stable wetlands.

There are numerous waterbodies within ten miles of the Morgan City, LA TARS Site, including but not limited to, the Gulf Intracoastal Waterway, West Cote Blanche Bay, Bayou Teche, Grand Lake, Bayou Carlin, and Vermilion Bay (Figure 3-4).

The Gulf Intracoastal Waterway is the portion of the Intracoastal Waterway located along the Gulf Coast of the U.S. It is a navigable, manmade inland waterway running approximately 1,050 miles from Carrabelle, Florida to Brownsville, Texas. This waterway provides a channel with a controlling depth of 12 feet, designed primarily for barge transportation. This waterway is located approximately three miles south of the Morgan City, LA TARS Site.




*Source: U.S. Geological Survey (January 30, 2002)*

**Figure 3-2**
**Aquifers and Aquifer Systems of Louisiana**

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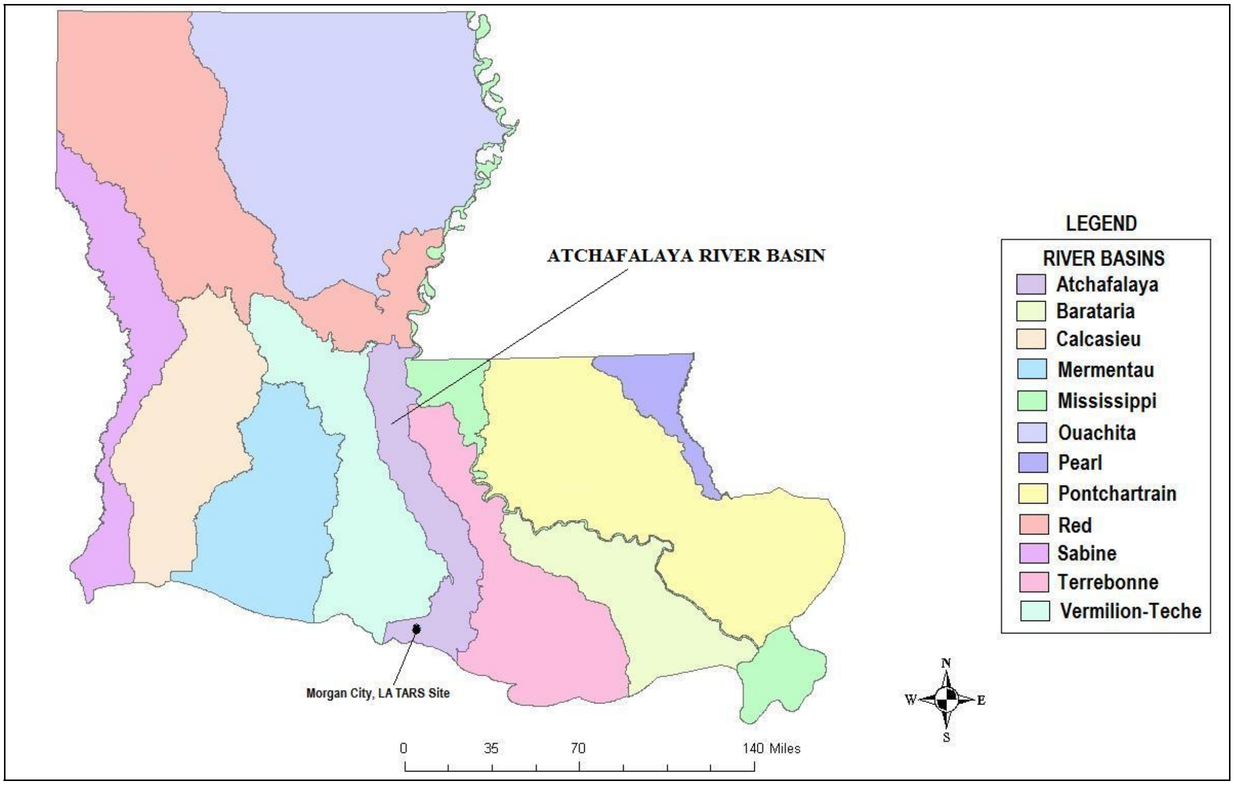


*Source: Louisiana Department of Environmental Quality (January 30, 2007)*

**Figure 3-3**
**Atchafalaya River Basin in Louisiana**

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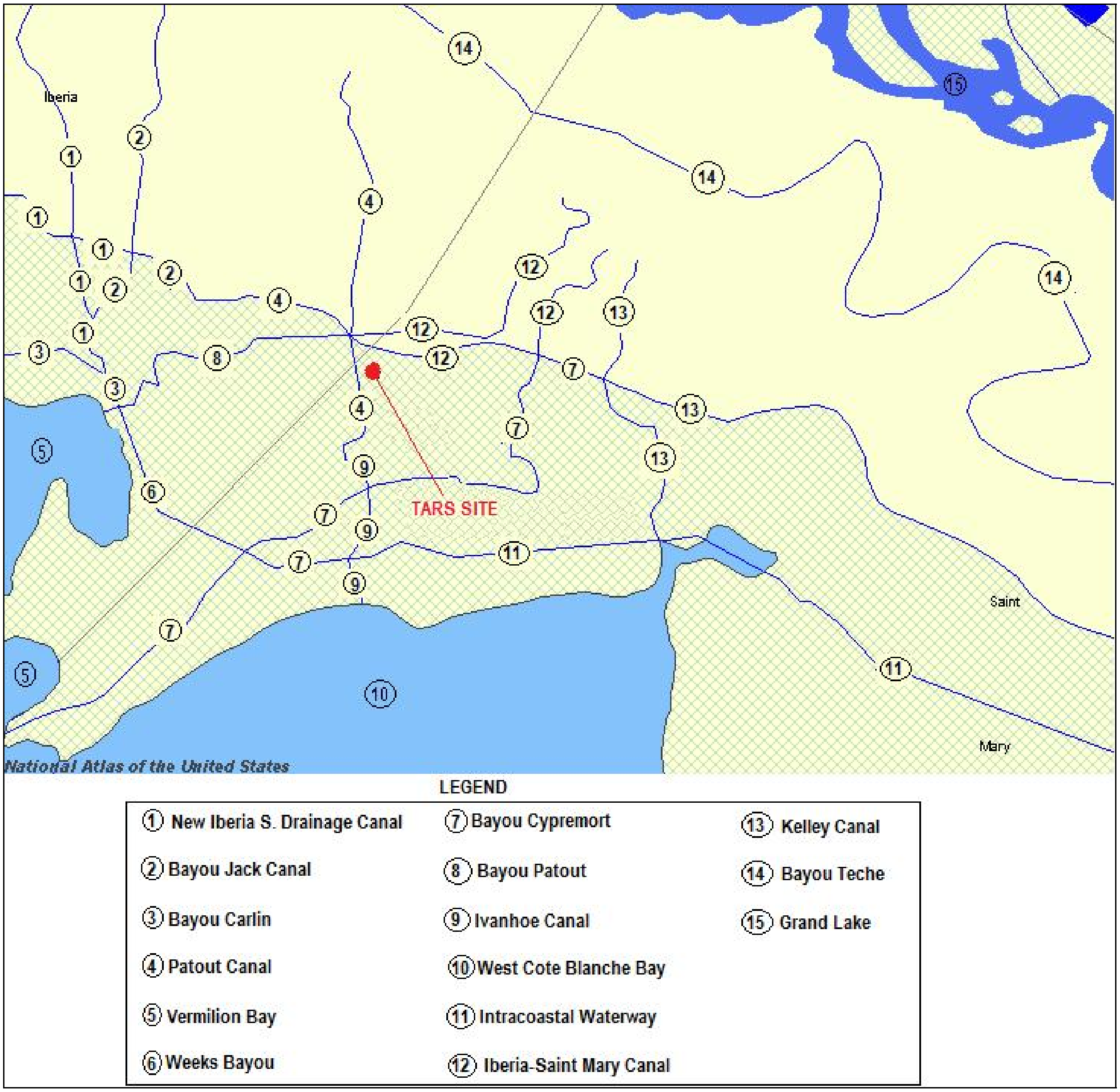


*Source: National Atlas (2009)*

**Figure 3-4**
**Waterbodies near the Morgan City, LA TARS Site**

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West Cote Blanche Bay is located on the southwest coast of St. Mary Parish, approximately four and a half miles south of the Morgan City, LA TARS Site. This bay is an inlet of the Gulf of Mexico, to which East Cote Blanche Bay connects directly to the south. In addition, West Cote Blanche Bay connects to the west with Vermilion Bay.

The Bayou Teche is a 125-mile long waterway of great cultural significance in south-central Louisiana. This waterway is located approximately six miles northeast of the Morgan City, LA TARS Site. It was the Mississippi River's main course when it developed a delta approximately 2,800 to 4,500 years ago. Through a natural process known as deltaic switching, the river's deposits of silt and sediment causes the Mississippi River to change its course every thousand years or so. The Bayou Teche begins in Port Barre, Louisiana, where it draws water from Bayou Courtableau, and then flows southward to meet the Lower Atchafalaya River at Patterson, Louisiana.

Grand Lake is a freshwater lake located in Cameron Parish, Louisiana, approximately nine and a half miles northeast of the Morgan City, LA TARS Site. This lake is approximately ten miles long and eight miles wide. The lake has a surface elevation of approximately 12 feet.

The Bayou Carlin, also known as the Delcambre Canal, runs from Lake Peigneur in Louisiana to Vermillion Bay near Weeks Island. It serves to connect the shrimping center of Delcambre to the Gulf of Mexico. It also has a spur connection to Avery Island and crosses the Gulf Intracoastal Waterway. This canal was first dredged in 1906 and is located approximately nine and a half miles west of the Morgan City, LA TARS Site (Figure 3-4).

Vermilion Bay is a bay in southern Louisiana, located approximately ten miles west of the Morgan City, LA TARS Site. This bay is an inlet of the Gulf of Mexico, to which it is connected to the south by a narrow strait called Southwest Pass. Marsh Island and a portion of the Louisiana mainland in southeastern Vermilion Parish otherwise separate it from the Gulf of Mexico. On the east, Vermilion Bay connects directly to West Cote Blanche Bay (Figure 3-4).

## 3.6 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

### 3.6.1 DEFINITION OF THE RESOURCE

Hazardous material is any item or agent (chemical, biological, or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Occupational Safety and Health Administration (OSHA) defines a hazardous material as any substance or chemical that is a "health hazard" or "physical hazard", including chemicals that are carcinogenic; toxic agents; irritants; corrosives; sensitizers; agents that act on the hematopoietic system; agents that damage the lungs, skin, eyes, or mucous membranes; chemicals that are combustible, explosive, flammable, oxidizers, pyrophones, unstable-reactive or water reactive; and chemicals that in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists, or smoke that may have any of the previously mentioned characteristics. The EPA incorporates OSHA's definition but adds any item or chemical that can cause harm to people, plants, or animals when released by spilling,

leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) as a waste that has the potential to (1) cause, or significantly contribute, to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The RCRA is a hazardous waste regulation that was enacted in 1976. This act created a system that records hazardous materials and waste. All hazardous wastes must be tracked from the time they are generated until their final disposal. In addition, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides regulation for hazardous waste because it creates a Superfund and provides for the clean up and remediation of closed and abandoned hazardous waste sites.

Evaluation of hazardous materials and waste particularly focuses on underground storage tanks (USTs), aboveground storage tanks (ASTs), and the storage, transportation, handling, and use of pesticides and herbicides, fuels, and petroleum, oil, and lubrication (POL) products. In addition, if any hazardous waste was generated, stored, transported, or disposed of at or near the project site, evaluation would be needed.

Additional materials that may pose a risk to human health are asbestos-containing material (ACM) and lead-based paint (LBP). For ACMs, the EPA has proposed a concentration limitation of seven million fibers per liter of drinking water for long fibers (length greater or equal to five micrometers). In addition, OSHA has set limits of 100,000 fibers with lengths greater than or equal to 5 micrometers per cubic meter of workplace air for 8-hour shifts and 40-hour workweeks. In 1978, the U.S. Consumer Product Safety Commission (16 Code of Federal Regulation CFR 1303) banned the residential use of LBP in the U.S. The U.S. Government defines LBP as "any paint or surface coating that contains lead equal to or exceeding one milligram per square centimeter or 0.5 percent by weight."

In 1975, the Department of Defense (DoD) established the Environmental Restoration Program (ERP) to provide guidelines and funding for the investigation and remediation of hazardous waste sites caused by disposal activities at military installations. The ERP complies with CERCLA, the Superfund Amendments and Reauthorization Act (SARA), and the RCRA. The ERP investigates and, if necessary, cleans up former disposal and test areas. In addition, Air Force Policy Directive (AFPD) 32-70 and Air Force Instruction (AFI) 32-700 incorporate the requirements of all federal regulations, other AFIs, and DoD directives for the management of hazardous materials, hazardous waste, and additional dangerous substances.

### 3.6.2 HAZARDOUS MATERIALS

*Hazardous Materials.* AFI 32-7086, *Hazardous Materials Management*¸ manages the procurement and use of hazardous materials to (1) support AF missions, (2) protect the safety and health of persons on AF installations and communities surrounding AF installations by ensuring proper management of hazardous materials, (3) minimize AF use of hazardous materials consistent with mission requirements, and (4) maintain AF compliance with

environmental requirements for hazardous materials usage. In addition, 10 United States Code (USC) § 2692, *Storage, Treatment, and Disposal of Nondefense Toxic and Hazardous Materials*, does not allow the DoD to store, treat, or dispose of any material that is toxic or hazardous that is not owned either by the DoD or by a member of the armed forces assigned to or provided military housing on the installation.

During inspection of the TARS Site, no evidence of the improper use, storage, or disposal of hazardous material was observed. The site currently stores nearly empty containers of methyl ethyl ketone (MEK), non-detergent motor oil, and an environmental wash in a storage cabinet within the Mechanical Building (Building 005) (Appendix B, page B-23, Photograph 44). Remnant petroleum products are stored in the Hazardous Material Building (Building 006) (Appendix B, page B-29, Photographs 55 and 56). Compressed gas cylinders with oxygen, nitrogen, acetylene, and sulfur hexafluoride are located in the Payload Service Building (Building 003) (Appendix B, pages B-24 through B-28, Photographs 46 through 54). Material Safety Data Sheets (MSDS) were reportedly kept for all hazardous substances kept at the aerostat site when it was operational. Neither the MSDS master list nor the MSDSs themselves could be located at the time of the site visit. Appendix C includes a list of the potentially hazardous items currently found on site on February 8, 2009 during the site visit.

At the Morgan City, LA TARS Site, diesel fuel was stored in a 4,750-gallon double-walled AST (Appendix B, page B-34, Photograph 66). This AST is located east of the Payload Service Building (Building 003) between the helium storage area and the Generator Enclosure. This tank was used for diesel fuel storage and in the refueling process for the aerostat radar aerostat when the site was operational. In March 2004, when the site was placed in cold storage, St. Martin Oil and Gas Company emptied the tank of fuel.

*Asbestos-Containing Material (ACM).* Based on interviews and review of available documents, no asbestos surveys have been conducted for the TARS Site. However, the EPA began banning the manufacture of ACMs in the late 1970s. Therefore, the Morgan City, LA TARS Site should not contain any ACMs since the facility was built in 1992. Further, the 1994 Environmental Baseline Survey (EBS) references a letter dated May 19, 1994 from the President of Wooten Construction (the primary contractor at the Morgan City, LA TARS Site) that certifies that no asbestos was used in any part of the construction of the aerostat project.

*Polychlorinated Biphenyls (PCBs).* Electric transformers and ballasts within older fluorescent light fixtures can contain PCBs. There are four transformers present at the Morgan City, LA TARS Site but these transformers contain less than one parts per million (ppm) of PCBs. The EPA banned the manufacture of PCBs in 1978. Since the TARS Site was built in 1992, no PCBs will be present within the ballasts of the fluorescent light fixtures.

*Lead-Based Paint (LBP).* Yellow LBP was previously used on the traffic safety lines on the concrete launching pad. Since the usage of the LBP, the Morgan City, LA TARS Site has converted to traffic paint that does not contain lead. However, it is common for these areas to be repainted without removing the previous layer of paint. Therefore, there is a possibility that lead from the previously used LBP is still present in these areas. An alternative to disposing of the LBP as a hazardous waste (if the lead content exceeds five mg/L) is to crush and recycle the

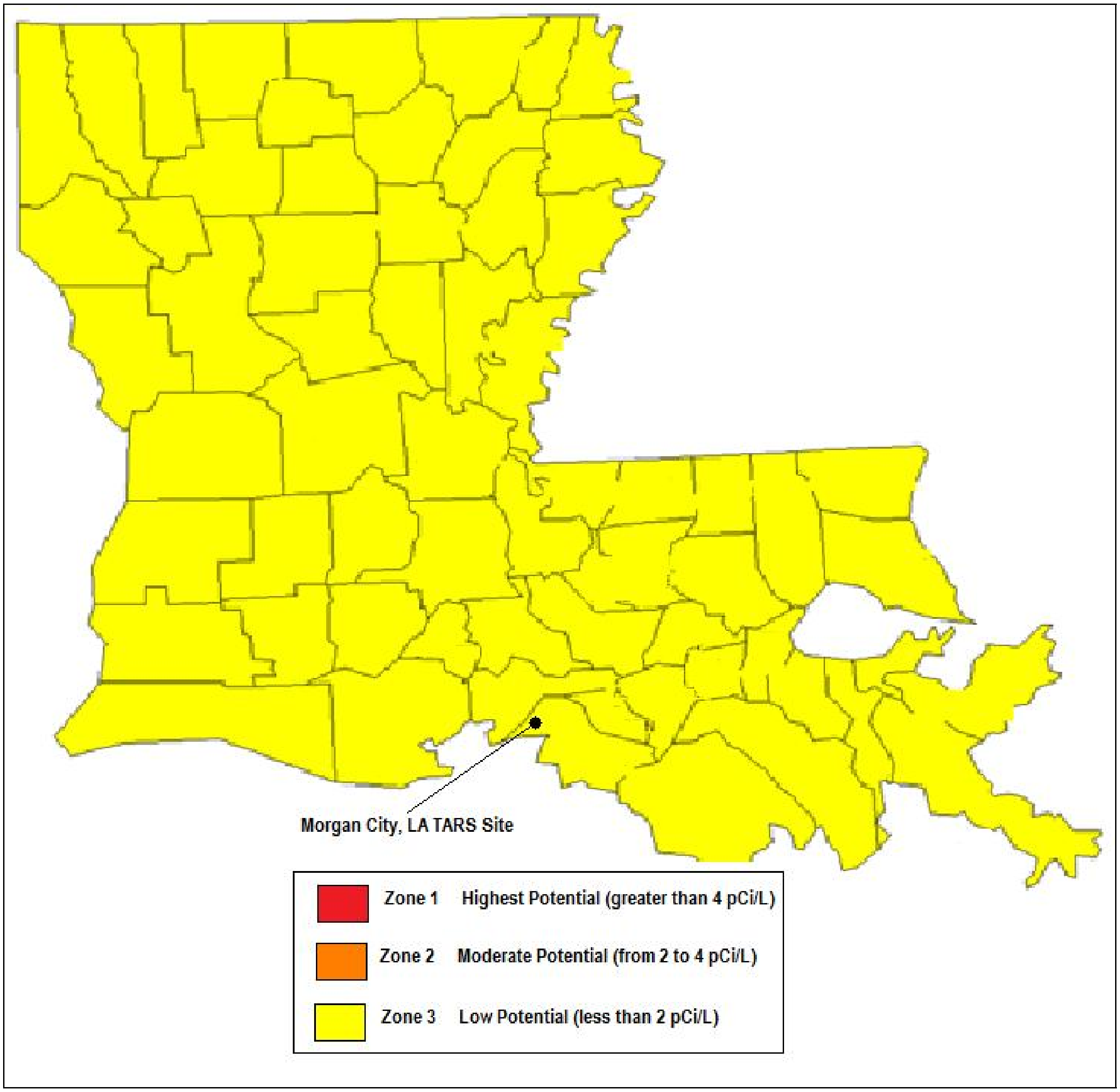
concrete that contains the LBP. The U.S. Army Corps of Engineers Research and Development Center completed a report on this process (Appendix D). This alternative is less costly than disposing the LBP as a hazardous waste and conserves landfill space. Under implementation of Alternative A, recycling the concrete at the site would be a viable option.

*Radon.* Radon is a naturally occurring radioactive gas that develops in soils and rocks as uranium decays. Radon is a noble, colorless, and odorless gas that has been determined to increase the risk of developing lung cancer. The EPA assigns zones to every county within the U.S. based on radon potential. Each zone designation reflects the average short-term measurements that can be expected to be measured in a building without the implementation of radon control methods. Figure 3-5 shows the radon zones for St. Mary Parish. The Morgan City, LA TARS Site is located in Zone 3, which includes areas with a low potential for the presence of radon. Advisory levels for radon in indoor air are four picocuries per liter (PCi/L). Results for radon testing in St. Mary Parish reveal an average radon level of 0.2 PCi/L. This information can be found in the Environmental Data Resources (EDR) Report found in Appendix E, page E-52.

*Spills.* There have been three spills of petroleum products at the Morgan City, LA TARS Site (Table 3-6).

On January 24, 1994, a diesel fuel spill of approximately four gallons occurred during tank refueling operations. According to the September 1994 EBS, an area four feet wide by two feet long by six inches deep was excavated where the spill occurred, immediately east and adjacent to the secondary containment structure for the diesel tank. The diesel-contaminated soil was placed in plastic bags and then placed in 55-gallon drums for appropriate disposal. The 1994 EBS indicated that 350 pounds of soil was removed from the area of the spill. The state of Louisiana did not require the spill to be reported at the time of its occurrence. In addition, soil sampling was not necessary. The current reportable quantity for spill of oil as shown in the Louisiana Environmental Regulatory Code Title 33 Chapter 39 is one barrel (42 gallons). Correspondence received from the Louisiana Department of Environmental Quality (LDEQ) dated January 15, 2003 (Appendix F), in response to review of the 2003 Draft EA/EBs, strongly recommends that confirmatory samples for diesel constituents in the original spill area be undertaken.

In 1999, there were two recorded incidents involving the spill of hydraulic fluid onto the concrete launching pad. In August 1999, 25 gallons of hydraulic fluid spilled on the concrete launching pad due to failure of a rotary drive control valve seal. In November 1999, ten gallons of hydraulic fluid spilled onto the launch pad due to the rupture of a hydraulic fitting on an auxiliary power unit. Both of these occurrences were handled appropriately using absorbents to capture the spill. The absorbent and spill materials were then placed in plastic bags and drums for appropriate disposal. The exact location of the hydraulic fluid spills on the launch pad is unknown as spill incident reports are unavailable. However, the 2000 EBS indicates these spills occurred at the mooring system concrete launching pad. This area is at least 100 feet from the nearest exposed soil. There was no residual evidence of these spills apparent at the time of the site investigation. No sampling has been performed in relation to these spills.




*Source: U.S. Environmental Protection Agency*

**Figure 3-5**
**EPA Radon Zones of Louisiana**

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**Table 3-6**
**Hazardous Material Spills at the Morgan City, LA TARS Site**

| Date of Spill | Location | Material Spilled | Spill Quantity | Corrective Action Taken |
|---|---|---|---|---|
| January 24, 1994 | Immediately east and adjacent to secondary containment structure under the diesel storage tank | #2 Diesel Fuel | 4 Gallons | 350 pounds of soil was removed from an area measuring 4' x 2' x 6", placed in plastic bags, then placed in 55 gallon drums for appropriate disposal. |
| August 1999 | Concrete launching pad near the Mooring System | Hydraulic Fluid | 25 Gallons | Absorbents were used to capture the spill, and then material was placed in plastic bags and drums for appropriate disposal. |
| November 1999 | Concrete launching pad near the Mooring System | Hydraulic Fluid | 10 Gallons | Absorbents were used to capture the spill and then material was placed in plastic bags and drums for appropriate disposal. |

### 3.6.3 WASTE MANAGEMENT

Since the Morgan City, LA TARS Site is currently deactivated and in cold storage, no waste oil is being produced that needs to be disposed. Prior to deactivation, waste materials were stored in drums that were located at various locations throughout the site. Waste containers in the Vehicle Maintenance Building (Building 002) are empty.

## 3.7 BIOLOGICAL RESOURCES

### 3.7.1 DEFINITION OF THE RESOURCE

Biological resources include plants, animals, and the habitats in which they live, such as wetlands, forests, and grasslands. Certain plant and animal species are protected or considered sensitive species because they are experiencing a generalized or localized population decline. A protected or sensitive species can be classified as a federally or state threatened or endangered species, a candidate species for federal listing, a species of special concern (SSC), or a species that is managed under a particular management plan. Under the Endangered Species Act (ESA), critical habitat is defined when specific areas within a geographic area are occupied by a federally listed species on which physical and biological features are essential to the conservation of that species.

An endangered species is an organism that is at risk of becoming extinct because it is few in numbers or is threatened by changing environmental or predation parameters. A threatened species is a species that is vulnerable to extinction in the near future. A candidate species is a species being considered for listing under the ESA as an endangered or threatened species but is not yet the subject of a proposed rule. A species of special concern is a species, subspecies, or distinct population that is not federally or state listed but is (a) declining at a rate that could result in listing, or (b) historically occurred in low numbers and is known to have threats pertinent to its persistence.

All migratory birds are protected under the Migratory Bird Treaty Act (MBTA). The MBTA was implemented in 1918 as a result of a convention between Great Britain and the U.S. (USFWS 2009). Since then, Mexico, Japan, and Russia have been included. The original purpose was to protect and regulate migratory bird populations from over harvesting. The importance of this was originally recognized due to the diminishing populations of waterfowl and birds whose feathers were used on hats. The MBTA prohibits the pursuit, hunt, take, kill, capture, possession, sale, or transport of any migratory bird, bird part, nest, or egg except as specifically permitted under the act (16 USC 703-713). In 2007, the U.S. Congress passed a revision providing an avenue for the Armed Forces to apply for take permits. A take permit can be issued for the "incidental take of migratory birds during military readiness activities." The proponent of a permit must confer and cooperate with the U.S. Fish and Wildlife Service (USFWS) "to develop appropriate and reasonable conservation measures to minimize or mitigate identifiable significant adverse effects" (Department of Interior; Federal Regulation. 72:39, 28 Feb. 2007). "Military readiness does not include (a) the routine operation of installations operating support functions, such as "administrative offices, military exchanges; commissaries; water treatment facilities; storage facilities; schools; housing; motor pools; laundries; morale, welfare, recreation activities; shops; and mess halls, (b) the operation of industrial activities, or (c) the construction or demolition of facilities listed above."

A wetland is an area of land whose soil is saturated with moisture either permanently or seasonally. These areas can be covered partially or completely by shallow pools of water. Wetlands include swamps, marshes, bogs, etc. Wetlands are extremely biologically diverse and can support a wide variety of plant and animal life. Wetlands are beneficial in that they improve

water quality, store floodwater, provide fish and wildlife habitat, are aesthetically pleasing, and are biologically productive. Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill waters of the U.S., including wetlands. Activities in waters of the U.S. regulated under this program include fill for development, water resource projects, infrastructure development, and mini projects. Section 404 requires a permit before dredged or fill material may be discharged into water of the U.S.

### 3.7.2 TERRESTRIAL COMMUNITIES AND WILDLIFE

*Terrestrial Communities.* The Morgan City, LA TARS Site is located within the Mississippi Alluvial Plain Ecoregion. This region is characteristic of freshwater and saltwater marsh vegetation of grasses, sedges, and rushes. It is not uncommon to hardly see any trees in this area. The most common species of vegetation in the freshwater marshes include alligator weed (*Alternanthera philoxeroides*), spike rush (*Eleocharis spp.*), maidencane (*Amphicarpum spp.*), cutgrass (*Leersia spp.*), and bulltongue (*Sagittaria lancifolia*). Marshhay cordgrass (*Spartina patens*), olney bulrush (*Scirpus americanus*), and saltgrass (*Distichlis spp.*) are typically in brackish areas, while smooth cordgrass (*Spartina alterniflora*) and black needlerush (*Juncus roemerianus*) are common in the saline marshes.

*Wildlife.* Wildlife and fisheries habitat is unique and diverse within the boundaries of St. Mary Parish. Because of its proximity to the Gulf of Mexico, the parish is home to an extremely diversified group of ecosystems. Important habitat types within the parish include the coastal marsh, woodland, and openland.

Within the coastal marsh wildlife habitat, a large proportion of waterfowl utilize the Mississippi Flyway to either winter in the marsh or stopover for food and rest during their migration to and from the tropics. Abundant wild alligators (*Alligator mississippiensis*) are harvested each year, contributing directly to the parish's economy. High populations of furbearers, such as nutria (*Myocastor coypus*), muskrat (*Ondatra zibethicus*), and raccoon (*Procyon lotor*) occur in the marshes of St. Mary Parish. The freshwater ponds and lakes located throughout the parish support high numbers of catfish, largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and crappie (*Pomoxis spp.*). The brackish marshes found in the parish serve as important nursery grounds for marine organisms. Species commonly found in these salt layer areas include shrimp, menhaden (*Brevoortia spp.*), redfish (*Sciaenops ocellatus*), speckled trout (*Cynoscion nebulosus*), blue crab (*Callinectes sapidus*), and oysters. Many other kinds of wildlife and fish utilize the coastal marsh. Songbirds, hawks, owls, shorebirds, and wading birds use the marsh either seasonally or year-round. The bald eagle (*Haliaeetus leucocephalus*) nests in baldcypress trees (*Taxodium districhum*) growing in swampy areas of the parish.

The woodland habitat provides habitat for woodland wildlife such as white-tailed deer (*Odocoileus virginianus*), rabbits, mink (*Neovision vision*), otters (*Lontra canadensis*), raccoons, squirrels, wood ducks (*Aix sponsa*), migratory birds, and wading birds. American alligator, crawfish, and fish are usually plentiful in wooded areas that are frequently flooded.

Openland habitat provides some habitat for wildlife but most areas are of limited value because of the lack of food and cover. Bobwhite quail (*Colinus virginianus*), cottontail rabbits (*Sylvilagus spp.*), and doves are the most common game species.

### 3.7.3 WETLANDS AND FLOODPLAINS

*Wetlands.* According to EO 11990, *Protection of Wetlands*, wetlands are defined as:

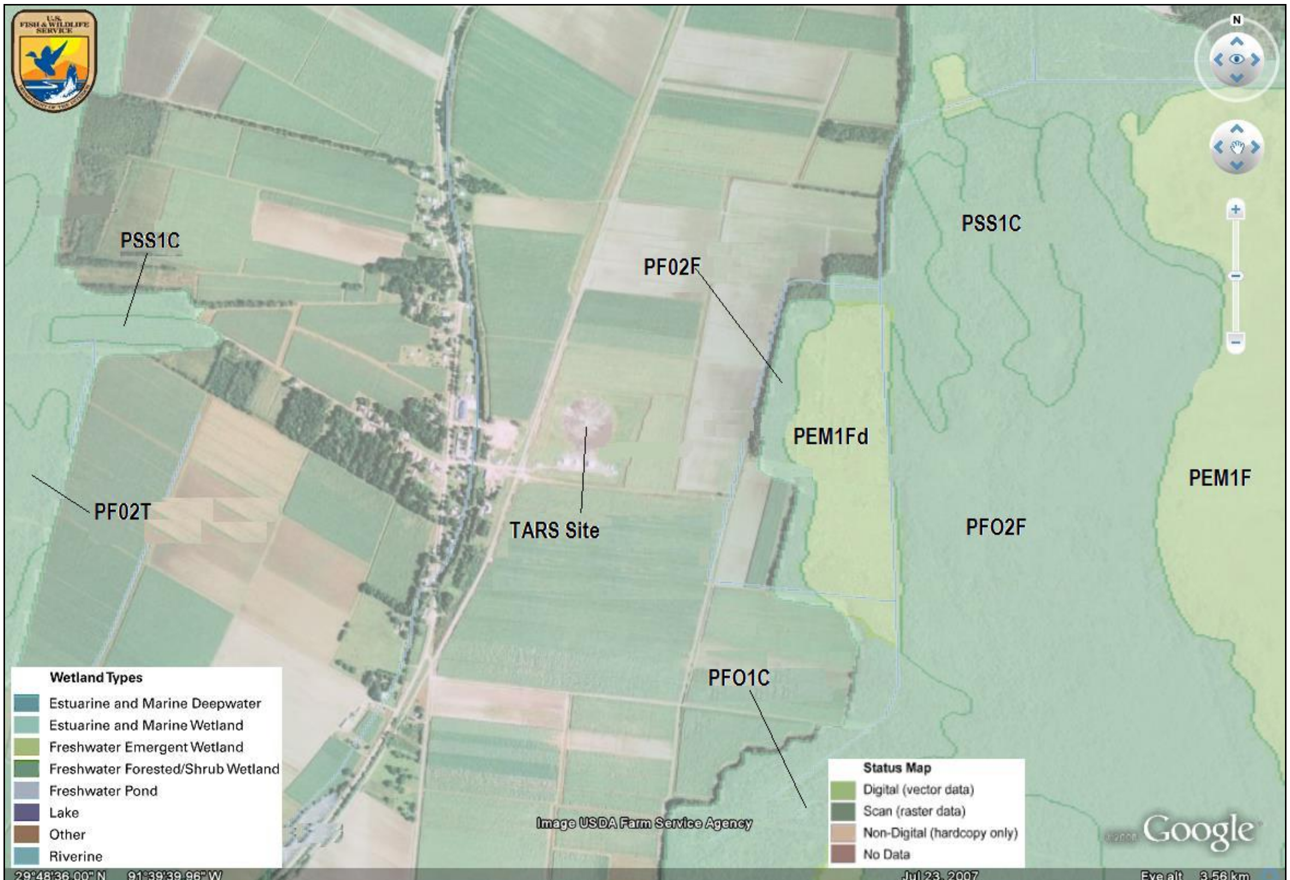
> "Those areas that are inundate by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mudflats, and natural ponds."

The primary requirement of this EO is that federal agencies avoid construction and management practices in areas that would adversely affect wetlands. The exception to this is when there is no practicable alternative and the Proposed Action includes all practicable measures to minimize harm to the wetlands. EO 11990 also directs federal agencies to minimize the destruction, loss, and degradation of wetlands and to preserve and enhance the natural beneficial values of wetlands within the agency's responsibilities for (a) acquiring, managing, and disposing of federal lands and facilities; (b) providing federal undertaken, finance, or assisted construction and improvements; and (c) conducting federal activities and programs affecting land use, including but not limited to, related land resources planning, regulation, and licensing activities.

The USFWS maintains a National Wetlands Inventory (NWI) that provides information on the characteristics, extent, and status of the nation's wetlands and deepwater habitats. According to this data, there are eight wetlands found in the near vicinity of the Morgan City, LA TARS Site (Figure 3-6). These eight wetlands are classified as follows: (1) PSS1C, (2) PFO2T, (3) PFO2F, (4) PFO1C, (5) PEM1Fd, (6) PFO2F, (7) PSS1F, and (8) PEM1F.

The PSS1C wetland is a Palustrine [P], Scrub-Shrub [SS], Broad-Leaved Deciduous [1], Seasonally Flooded [C] wetland. Vegetation in this type of wetland consists of woody vegetation that is less than 20 feet tall. Species of vegetation include tree shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions. The surface water in this wetland is present for extended periods, especially early in the growing season. However, by the end of the growing season, surface water is usually absent.

The PFO2T wetland is a Palustrine [P], Forested [FO], Needle-Leaved Deciduous [2], Semipermanent-Tidal [T] wetland. This type of wetland is characteristic of woody vegetation that is six meters tall or taller. In addition, typical of this wetland are woody gymnosperms (trees or shrubs) with needle-shaped or scale-like leaves that are shed during the cold or dry season.




**LEGEND**

PSS1C: Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded wetland
PFO2T: Palustrine, Forested, Needle-Leaved Deciduous, Semipermanently Tidal wetland
PFO2F: Palustrine, Forested, Needle-Leaved Deciduous, Semipermanently Flooded wetland
PFO1C: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded wetland
PEM1Fd: Palustrine, Emergent, Persistent, Semipermanently Flooded, Partially Drained/Ditched wetland
PFO2F: Palustrine, Forested, Needle-Leaved Deciduous, Semipermanently Flooded wetland
PSS1F: Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Semipermanetly Flooded wetland
PEM1F: Palustrine, Emergent, Persistent, Semipermanently Flooded wetland

*Source: U.S. Fish and Wildlife Service, National Wetlands Inventory (December 4, 2009)*

**Figure 3-6**
**Wetlands within the Vicinity of the Morgan City, LA TARS Site**

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The PFO2F wetland is a Palustrine [P], Forested [FO], Needle-Leaved Deciduous [2], Semipermanently Flooded [F] wetland. This type of wetland is characteristic of woody vegetation that is six meters tall or taller. In addition, typical of this wetland are woody gymnosperms with needle-shaped or scale-like leaves that are shed during the cold or dry season. Surface water in this wetland persists throughout the entire growing season, in most years.

The PFO1C wetland is a Palustrine [P], Forested [FO], Broad-Leaved Deciduous [1], Seasonally Flooded [C] wetland. This type of wetland is characteristic of woody vegetation that is six meters tall or taller. Surface water in this wetland persists throughout the entire growing season, in most years.

The PEM1Fd wetland is a Palustrine [P], Emergent [EM], Persistent [1], Semipermanently Flooded [F], Partly Drained [d] wetland. This wetland is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. Vegetation is present for the majority of the growing season, in most years. This type of wetland is usually dominated by perennial plants and by species that remain standing until the beginning of the next growing season. Surface water in this wetland persists throughout the growing season, in most years. The water level in this wetland has been artificially lowered, but is still considered a wetland because the soil moisture is sufficient enough to support hydrophytes.

The PFO2F wetland is a Palustrine [P], Forested [FO], Needle-Leaved Deciduous [2], Semipermanently Flooded [F] wetland. This type of wetland is characterized by woody vegetation that is at least six meters tall. Woody gymnosperms with needle-shaped or scale-like leaves are often found in this area. These leaves are shed during the cold or dry season. Surface water in this wetland persists throughout the growing season, in most years.

The PSS1F wetland is a Palustrine [P], Scrub-Shrub [SS], Broad-Leaved Deciduous [1], Semipermanently Flooded [F] wetland. This wetland includes areas dominated by woody vegetation less than 20 feet tall. Common vegetation includes tree shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. Surface water in this wetland persists throughout the growing season, in most years.

The PEM1F wetland is a Palustrine [P], Emergent [EM], Persistent [1], Semipermanently Flooded [F] wetland. This wetland is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season, in most years. This wetland is usually dominated by perennial plants and by species that normally remain standing until the beginning of the next growing season. Surface water in this wetland persists throughout the entire growing season.

*Floodplains.* According to EO 11988, *Floodplain Management*, a floodplain is defined as:

> "the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including a minimum, that area subject to a one percent or greater chance of flooding in any given year."

EO 11988 requires federal agencies to avoid the long and short-term adverse effects associated with the occupancy and modification of floodplains. In addition, this EO requires agencies to avoid direct and indirect support of floodplain development whenever there is a practicable alternative. According to the Federal Emergency Management Agency (FEMA), the TARS Site is located within a 100-year floodplain, within Zone V17 (Figure 3-7). Zone V17 includes areas inundated by 100-year flooding with velocity hazard (wave action).

### 3.7.4 THREATENED AND ENDANGERED AND SPECIAL STATUS SPECIES

Table 3-7 provides a summary of rare, threatened, and endangered species that are known to be present or could potentially be present in St. Mary Parish. This table includes 24 species, two of which are protected under the ESA. These two species have the potential to be present at the Morgan City, LA TARS Site and include the piping plover (*Charadrius melodus*) and the Louisiana black bear (*Ursus americanus luteolus*). The bald eagle (*Haliaeetus leucocephalus*) is a threatened species of Louisiana, but is not protected under the ESA. The remaining species present in the table include rare or natural species known to occur in St. Mary Parish. Appendix G provides a complete list of all threatened, endangered, and special status species.

*Louisiana Black Bear*. The Louisiana Black bear is a federally threatened species that is primarily associated with forested wetlands. However, it also utilizes a variety of habitat types, including marsh, spoil banks, and upland forests. Within forested wetlands, black bear habitat requirements include soft and hard mast for food, thick vegetation for escape cover, vegetated corridors for dispersal, large trees for den sites, and isolated areas for refuge from human disturbance. Remaining Louisiana black bear populations occur in the Tensas River Basin, the Upper Atchafalaya River Basin, and coastal St. Mary and Iberia Parishes. The primary threats to the species are continued loss of bottomland hardwoods and fragmentation of remaining forested tracts. In addition to habitat loss, human-bear conflicts are a major threat to the conservation and protection of the Louisiana black bear. Human-caused losses include collisions with automobiles, intentional or illegal killing, and removal from the wild, which is necessary when bears that have become habituated to human attractants pose a risk to public health or safety.

Louisiana black bears, particularly pregnant females, normally den from December through April. Preferred den sites include bald cypress and water-tupelo trees with visible cavities, that have a diameter at breast height of 36 inches or greater, and which occur in or along rivers, lakes, streams, bayous, sloughs, or other waterbodies. In areas where suitable den trees are uncommon, Louisiana black bears often den in shallow burrows or depressions within areas of dense cover.


## EXPLANATION OF ZONE DESIGNATIONS

| ZONE | EXPLANATION |
|---|---|
| A | Areas of 100-year flood; base flood elevations and flood hazard factors not determined |
| AO | Areas of 100-year shallow flooding where depths are between 1 and 3 feet; average depths of inundation are shown, but no flood hazard factors are determined |
| AH | Areas of 100-year shallow flooding where depths are between 1 and 3 feet; base flood elevations are shown, but no flood hazard factors are determined |
| A1-A30 | Areas of 100-year flood; base flood elevations and flood hazard factors determined |
| A99 | Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined |
| B | Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than 1 foot or where the contributing drainage area is less than 1-square mile; or areas protected by levees from the base flood (Medium Shading) |
| C | Areas of minimal flooding (No shading) |
| D | Areas are undetermined, but possible, flood hazards |
| V | Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined |
| V1-V30 | Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined |

*Source: Federal Emergency Management Agency*

**Figure 3-7**
**Floodplain Map of the Morgan City, LA TARS Site**
*Note: The TARS Site is located within the red box.*

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**Table 3-7**
**Threatened and Endangered Species of St. Mary Parish, Louisiana**

| Common Name | Scientific Name | Federal | State |
|---|---|---|---|
| ***BIRDS*** | | | |
| Snowy Plover | *Charadrius alexandrinus* | | |
| Piping Plover | *Charadrius melodus* | T | E/T |
| Gull-Billed Tern | *Gelochelidon nilotica* | | |
| Bald Eagle | *Haliaeetus leucocephalus* | | T |
| Roseate Spoonbill | *Platalea ajaja* | | |
| ***FISH*** | | | |
| Paddlefish | *Polyodon spathula* | | |
| ***MAMMALS*** | | | |
| Louisiana Black Bear | *Ursus americanus luteolus* | T | T |
| ***PLANTS*** | | | |
| Golden Canna | *Canna flaccida* | | |
| Cypress-Knee Sedge | *Carex decomposita* | | |
| Floating Antler-Fern | *Ceratopteris pteridoides* | | |
| Croomia | *Croomia pauciflora* | | |
| Lance-Leaved Glade Fern | *Diplazium lonchophyllum* | | |
| Southern Shield Wood-Fern | *Dryopteris ludoviciana* | | |
| Rooted Spike-Rush | *Eleocharis radicans* | | |
| Common Water-Willow | *Justicia Americana* | | |
| Square-Stemmed Monkey-Flower | *Mimulus ringens* | | |
| Coastal Ground Cherry | *Physalis angustigolia* | | |
| Woodland Bluegrass | *Poa sylvestris* | | |
| Millet Beakrush | *Rhynchospora miliacea* | | |
| Broadleaf Arrowhead | *Sagittaria latifolia* | | |
| Scarlet Woodbine | *Schisandra glabra* | | |
| Texas Aster | *Symphyotrichum drummondii* | | |
| Willdenow's Fern | *Thelypteris interrupta* | | |
| Broad-Leaved Spiderwort | *Tradescantia subaspera* | | |

*Source: Louisiana Department of Wildlife and Fisheries (2005)*

The Morgan City, LA TARS Site is located within Louisiana black bear critical habitat and is approximately 1,500 feet from breeding habitat. If implementation of Alternative A were to occur, there is a possibility of disturbing nearby Louisiana black bear populations. Coordination letters were received from the USFWS and the Louisiana Department of Wildlife and Fisheries in which concern of black bear habitat under implementation of Alternative A is expressed (Appendix A). For more information on the Louisiana black bear, refer to Appendix H.

*Piping Plover*. The piping plover is a migratory shorebird that winters along beaches of the Gulf Coast. Piping plovers spend more than 70 percent of the year at these wintering grounds. Common winter habitats includes beaches, sand flats, mudflats, algal mats, emergent sea grass beds, wash-over passes, and small dunes where seaweed (*Sargassum*) or other debris has accumulated sand. Since the Morgan City, LA TARS Site does not contain the piping plover's

preferred habitat, the potential for this species to occur at the site is minimal. For more information on the piping plover, refer to Appendix H.

## 3.8 AIR QUALITY

### 3.8.1 DEFINITION OF THE RESOURCE

The Clean Air Act (CAA) of 1977, as amended, requires federal facilities to comply with all federal, state, interstate, and local requirements regarding the control and abatement of air pollution in the same manner as any nongovernmental entity, including any requirement for permits. The "Conformity Rule" of the CAA states that all federal action must conform to appropriate State Implementation Plans (SIPs). This rule took effect on January 31, 1994, and at present applies only to federal actions in nonattainment areas (those not meeting the National Ambient Air Quality Standards [NAAQS] for the criteria pollutants in the CAA).

Pursuant to the CAA, the "Conformity Rule" (40 Code of Federal Regulations, Part 51) was created to ensure that actions by the federal government will neither cause nor aggravate a violation in air quality standards, nor delay timely attainment of standards. In other words, general conformity aims to prevent federal projects from jeopardizing a state's ability to achieve air quality standards. The "Conformity Rule" requires states to adopt and submit a general conformity SIP not later than November 30, 1994.

*General Conformity in Louisiana.* Any project involving federal funds or requiring federal approval may be subject to the general "Conformity Rule." This rule applies in areas of the state designated as not meeting federal air quality standards (nonattainment areas) or in areas which have a history of nonattainment, but are currently meeting the standards (maintenance areas).

*De Minimis Levels in Louisiana.* The "Conformity Rule" establishes *de minimis*, or maximum, emission levels for tons per year (tpy) based on the severity of an area's air quality problem. These levels for nonattainment areas in Louisiana are identified in the following table (Table 3-8). If anticipated air emissions from a proposed federal action are below *de minimis* levels, then the project may proceed. If, on the other hand, emissions are expected to exceed the *de minimis* levels, a general conformity determination must be made by the federal agency involved.

**Table 3-8**
***De Minimis* Levels for Louisiana's Eight-Hour Ozone Nonattainment and Maintenance Areas**

| Area | Classification | VOC tpy | $NO_x$ tpy |
|---|---|---|---|
| Baton Rouge (5-parish area) | Moderate Ozone Nonattainment | 100 | 100 |

*Source: Louisiana Department of Environmental Quality (2009)*

In quantifying the emissions associated with a project, both direct and indirect emissions are to be included. Only emissions within the scope of the federal agency's authority are to be included. For example, a federal military facility expansion would be paid for and operated with

federal money with every aspect of the project under the control of the DoD. Direct emissions such as construction activities would be included, as well as indirect emissions, such as on-site emissions from the vehicles of military personnel associated with the facility.

*Demonstrating Conformity.* If emissions exceed *de minimis* levels, some options for demonstrating conformity include, but are not limited to:

- Identifying and accounting for the emissions in the latest EPA-approved SIP;
- Providing written assurance from the state that it will revise the SIP to include the project's emissions; and
- Offsetting emissions exceeding *de minimis* levels through a SIP revision, purchase of emission reduction credits, use of cleaner equipment, or by some other approved means.

*Exemptions.* The general conformity requirements do not apply to federal actions that:

- Occur in an attainment area;
- Result in total direct and indirect emissions that are less than the emission levels specified in Table 3-8 (*de minimis* threshold levels);
- National Environmental Policy Act (NEPA) final documentation completed prior to 3 January 1994;
- Are related to transportation plants, programs, and projects developed, funded, or approved under the Federal Transit Act (49 U.S.C. 1601);
- Qualify for exemptions (e.g. judicial and legislative proceedings; rulemaking and policy development; electric power marketing activities that involve the acquisition, sale, and transmission of electric energy; prescribed burning; and continuing responses to an emergency or disaster);
- Result for alteration and additions to existing structures that are required by environmental legislation;
- Result from remedial actions carried out under CERCLA; or
- Are related to federal actions that are part of disaster response.

*Nonattainment Areas in Louisiana.* Nonattainment areas are areas that have failed to meet federal standards for ambient air quality. Near nonattainment areas currently meet federal standards but are at risk of violating standards. Louisiana is in attainment for all federal NAAQS pollutants, with the exception of ozone in the five-parish area that includes the city of Baton Rouge.

Louisiana has one Early Action Compact (EAC) area: the Shreveport-Bossier City area. The most recent EAC plan for this area was submitted on June 30, 2009. This plan was utilized to develop SIP strategies to reduce emission numbers in order to meet the eight-hour ozone standard.

**Table 3-9**
**Nonattainment and Ozone Early Action Compact Area in Louisiana**

| Nonattainment Area | Counties | Classification |
|---|---|---|
| **Eight-Hour Ozone Nonattainment Areas** | | |
| Baton Rouge | Iberville<br>W. Baton Rouge<br>Ascension<br>E. Baton Rouge<br>Livingston | Moderate |
| **Ozone Early Action Compact (EAC) Area** | | |
| Shreveport-Bossier City | Bossier<br>Caddo<br>DeSoto<br>Webster | Attainment |

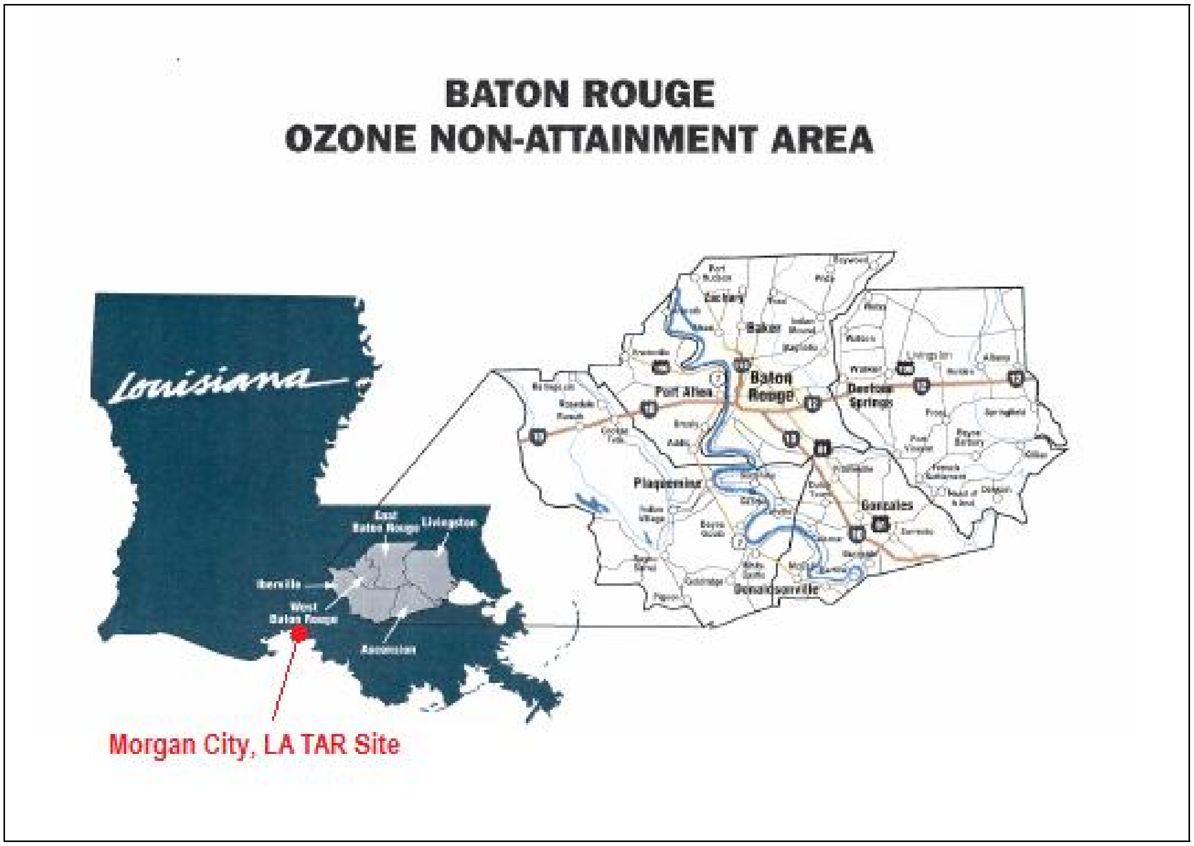
*Source: Louisiana Department of Environmental Quality (2009)*

*National Ambient Air Quality Standards (NAAQS).* The CAA authorizes EPA to establish NAAQS to protect health and public welfare and to regulate emissions of hazardous air pollutants. The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six "criteria" pollutants, including carbon monoxide, lead, nitrogen dioxide, particulate matter ($PM_{10}$ and $PM_{2.5}$), ozone, and sulfur dioxide. The CAA established two types of national air quality standards: primary standards and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Table 3-10 presents the NAAQS set by the EPA.

### 3.8.2 EXISTING CONDITIONS

The facility is no longer active and is in cold storage. Therefore, air emissions related to the operation of on-site machinery and equipment, and to personnel transportation does not exist.

The U.S. EPA classifies the air quality control region, or in subareas of a region, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each region are therefore designated as either "attainment," or "nonattainment," "maintenance," or "unclassified" for each of the six criteria pollutants. Attainment means that the air quality within a region is better than the NAAQS; nonattainment indicates that criteria pollutant levels exceed NAAQS. The Morgan City, LA TARS Site lies within a region of attainment, and therefore complies with the NAAQS.




*Source: Louisiana Department of Environmental Quality (2009)*

**Figure 3-8**
**Ozone Nonattainment Area in the State of Louisiana**

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**Table 3-10**
**National Ambient Air Quality Standards**

| Pollutant | Standard Value | Standard Type |
|---|---|---|
| *Carbon Monoxide (CO)* | | |
| 8-hour average | 9 ppm | Primary |
| 1-hour average | 35 ppm | Primary |
| *Nitrogen Dioxide ($NO_2$)* | | |
| Annual Arithmetic Mean | 0.053 ppm | Primary and Secondary |
| *Ozone* | | |
| 8-hour average | 0.075 ppm | Primary and Secondary |
| 1-hour average | 0.12 ppm | Primary and Secondary |
| *Lead (Pb)* | | |
| Quarterly Average | 1.5 $\mu g/m^3$ | Primary and Secondary |
| *Particulate Matter ($PM_{10}$)* | | |
| Annual Arithmetic Mean | | Primary and Secondary |
| 24-hour average | 150 $\mu g/m^{3\ d}$ | Primary and Secondary |
| *Particulate Matter ($PM_{2.5}$)* | | |
| Annual Arithmetic Mean | 15 $\mu g/m^3$ | Primary and Secondary |
| 24-hour Average | 35 $\mu g/m^3$ | Primary and Secondary |
| *Sulfur Dioxide ($SO_2$)* | | |
| Annual Arithmetic Mean | 0.03 ppm | Primary |
| 24-hour average | 0.14 ppm | Primary |
| 3-hour average | 0.5 ppm | Secondary |

*Source: U.S. Environmental Protection Agency (2009)*

# 3.9 AIRSPACE

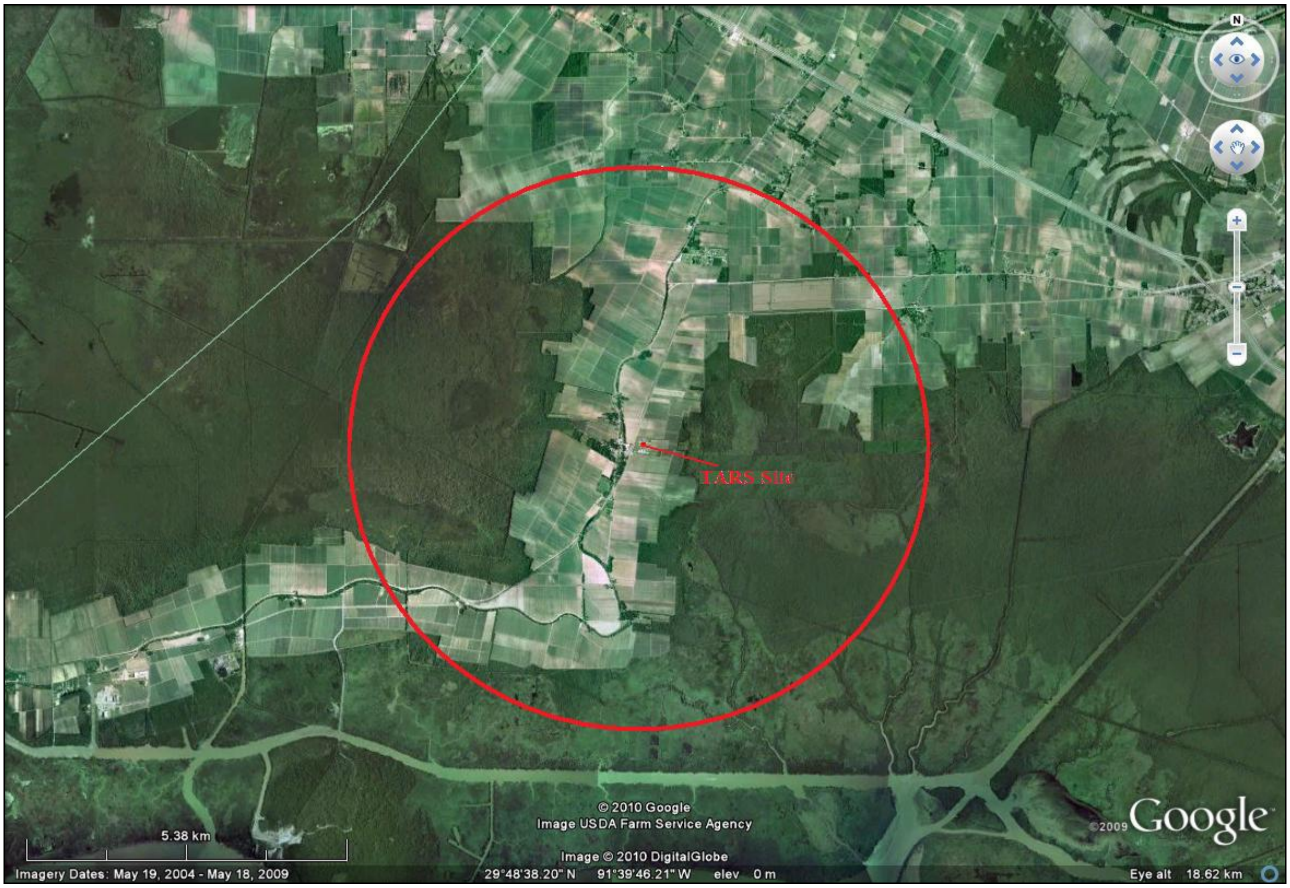
## 3.9.1 DEFINITION OF THE RESOURCE

Airspace includes any specific three-dimensional portion of the atmosphere. Airspace can be further divided into a variety of areas and zones, including those where there are restrictions on flying activities or complete prohibition of flying activities. The airspace above the Morgan City, LA TARS Site is classified as restricted airspace. Restricted airspace is an area of airspace in which the local controlling authorities have determined that air traffic must be restricted for safety or security concerns. According to the Federal Aviation Administration (FAA), "Restricted areas denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery, or guided missiles. Penetration of restricted areas without authorization from the using or controlling agency may be extremely hazardous to the aircraft and its occupants."

## 3.9.2 EXISTING CONDITIONS

The Morgan City, LA TARS Site is located beneath Restricted Area R-3807, which is positioned within a three-mile diameter circle centered at 29˚ 48' 37" North, 91˚ 39' 47" West (Figure 3-9).

This Restricted Area extends upward from the TARS Site to an elevation of 15,000 feet mean sea level (MSL) and outward four nautical miles. The time of designation for this airspace is continuous and the controlling agency is the FAA, Houston Air Route Traffic Control Center (ARTCC). On September 16, 2008, the using agency for this airspace changed from AF, Southeast Air Defense Sector, Tyndall Air Force Base (AFB), Florida to Western Air Defense Sector (WADS), McChord AFB, Washington.




*Source: Google Earth, 2009*

**Figure 3-9**
**Restricted Airspace, R-3870, at the Morgan City, LA TARS Site**
*Note: The Restricted Airspace consists of the area within the red circle.*
*Three-mile diameter circle extending upward for 15,000 feet*

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# 4.0 ENVIRONMENTAL CONSEQUENCES

## 4.1 LAND USE, VISUAL RESOURCES, AND RECREATION

### 4.1.1 PROPOSED ACTION

*Land Use.* Under the Proposed Action, all existing buildings and infrastructure at the Morgan City, LA TARS Site would remain in place. Land use would change since the landowner would resume control of the site, and the site would no longer be used for military purposes. In addition, no effects would be made to the surrounding land.

*Visual Resources.* No changes would occur to the visual resources of the site under the Proposed Action. All buildings and infrastructure would remain the same.

*Recreation.* Under the Proposed Action, the TARS Site would be returned to the landowner. Since it is unknown what the landowner would do with the property, it is unknown whether recreational activities would be affected. However, since no recreational activities currently exist at the site, no negative effects to these activities would occur.

### 4.1.2 ALTERNATIVE A

*Land Use.* Implementation of Alternative A would have no significant effect on the land use of nearby or adjacent areas to the site. However, following demolition and restoration of the site, it is possible for the site to return to its previous use as a sugar cane plantation. Land use at the site would also change since it would no longer be used for military purposes.

*Visual Resources.* The visual resources at the Morgan City, LA TARS Site would be temporarily affected under this alternative. During the demolition process, aesthetics of the area would be unappealing; however, this is a short-term effect. All buildings and infrastructure at the site would be removed and restoration would occur. Following restoration, the site would resemble its natural state of undeveloped openland.

*Recreation.* No significant effect would occur under implementation of Alternative A. No recreation activities currently exist at the site; therefore, none can be affected following the demolition and restoration of the site.

### 4.1.3 ALTERNATIVE B

*Land Use.* Under Alternative B, no direct effects to land use would result from the Government purchasing the property at fair market value from the landowner. The land would be removed from private ownership and placed in federal ownership. It is unknown what the Government would do with the land after acquiring it. Therefore, long-term effects cannot be accessed. However, there would be no immediate change in the land use conditions under implementation of Alternative B.

*Visual Resources.* Under Alternative B, no direct effects to aesthetics and visual resources would result from the proposed property acquisition because no restoration or construction activities would take place.

*Recreation.* Under Alternative B, no direct effects to recreational activities would occur since none currently exist at the site.

### 4.1.4 ALTERNATIVE C

*Land Use.* Under Alternative C, no direct effects to land use would result from the Government acquiring the property from the landowner through land condemnation. However, the land would be placed into federal ownership, rather than private ownership. It is unknown what the Government would do with the land after acquiring it; therefore, long-term effects to land use cannot be accessed. However, under implementation of this alternative, there would be no change from the current land use conditions at the Morgan City, LA TARS Site.

*Visual Resources*. Under Alternative C, the Morgan City, LA TARS Site would be acquired by the Government through land condemnation. Since no construction activities would take place under this alternative, there would be no change to the visual resources currently existing at the site.

*Recreation.* There are no recreational activities that take place at the site; therefore, none would be affected under implementation of Alternative C.

### 4.1.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Under Alternative D (No-Action Alternative), no changes in the status of the Morgan City, LA TARS Site would result. All existing buildings and infrastructure at the site would remain intact and the site would remain in cold storage. Therefore, no change in land use, visual resources, or recreation would occur upon implementation of Alternative D (No-Action Alternative). In addition, no significant change would take place to adjacent or nearby land.

## 4.2 SOCIOECONOMICS, DEMOGRAPHICS, AND ENVIRONMENTAL JUSTICE

### 4.2.1 PROPOSED ACTION

Implementation of the Proposed Action would have a slight negative effect on socioeconomics at the site. The TARS Site is currently in caretaker status, employing contract maintenance and security personnel. However, once the property is transferred to the landowner, these personnel potentially would no longer be needed. However, we cannot assume the future plans of the landowner. Environmental justice would not be affected under the Proposed Action.

### 4.2.2 ALTERNATIVE A

The implementation of Alternative A would positively affect socioeconomics at the site in the short-term. Creation of short-term jobs would become available during site demolition and restoration. However, these beneficial effects are small and short-term. Implementation of this alternative would not be expected to result in long-term significant effects to the local economy or socioeconomic conditions. In addition, no issues concerning Environmental Justice would result under this alternative.

### 4.2.3 ALTERNATIVE B

Schools, hospitals, churches, other public facilities, and services near the project area would not be affected under implementation of Alternative B. Community cohesiveness, neighborhood character, access, and community circulation patterns would be unchanged under this alternative. Although there are minority and low-income populations living within the region of influence, under Alternative B, no direct effects to low-income communities or minority populations would result from the property acquisition.

### 4.2.4 ALTERNATIVE C

Nearby public facilities and services would not be affected under implementation of Alternative C. However, it is unknown if the Government would keep the Morgan City, LA TARS Site in cold storage following acquisition. Therefore, the long-term effect to the caretaker and maintenance grounds personnel jobs under implementation of this alternative cannot be assessed. However, there would be no immediate effects to the socioeconomics, demographics, or environmental justice of the area under implementation of Alternative C.

### 4.2.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

The Morgan City, LA TARS Site became deactivated in October 2002, resulting in the loss of the site’s employees. The site currently does not employ any personnel, except contract grounds maintenance and security personnel that visit the site periodically. Therefore, no significant effect would occur at the site under Alternative D (No-Action Alternative). Employment, housing, and other socioeconomic factors would not be affected under this alternative.

## 4.3 CULTURAL RESOURCES

### 4.3.1 PROPOSED ACTION

The Proposed Action does not include any earth-disturbing activities that might present a potential for affecting archaeological or cultural resources. In addition, there are no known cultural resources present at the site. Therefore, implementation of the Proposed Action would present no potential for effects to cultural resources.

### 4.3.2 ALTERNATIVE A

Under Alternative A, all buildings and infrastructure would be removed. Since the site was built in 1992, none of the buildings are considered of historic value. There would be earth-disturbing activities that take place during demolition of the site. However, because no known archaeological or cultural resources exist at the site, a significant effect would not occur under implementation of this alternative. On November 4, 2009, the Louisiana Department of Historic Preservation concurred that no significant effect would occur to cultural resources at the site due to demolition and restoration activities (Appendix A). In the unlikely event any archaeological resources were discovered during demolition activities, the demolition contractor would be instructed to halt demolition and immediately notify the State Historic Preservation Officer.

### 4.3.3 ALTERNATIVE B

Coordination was undertaken with the Louisiana Department of Historic Preservation (Appendix A). Under Alternative B, a beneficial, long-term effect would result by the property being transferred to federal ownership and having protection under federal laws and regulations. Although no cultural resources are known to exist at the site, if any were to be discovered in the future, while under federal ownership, they would have long-term federal protection.

### 4.3.4 ALTERNATIVE C

There are no known cultural resources present at the Morgan City, LA TARS Site. Therefore, none would be affected under implementation of Alternative C.

### 4.3.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Alterative D (No-Action Alternative) involves no earth-disturbing activities that could potentially affect any archaeological or cultural resources. In addition, there is no indication of any significant cultural resources at the site. Therefore, this alternative would produce no significant effects to cultural resources at the site.

## 4.4 INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES

### 4.4.1 PROPOSED ACTION

The Proposed Action would not affect the infrastructure of the site. All buildings, roads, pavements, etc would remain intact. In addition, all electrical lines would remain in place. Currently, the TARS Site has no electricity or phone services provided since it is in cold storage. It is unknown if the landowner would resume electricity services following transfer of the property.

### 4.4.2 ALTERNATIVE A

Under implementation of Alternative A, all buildings and infrastructure, including roads and parking lots, would need to be removed within the site. Temporary traffic may result as a short-term effect during the demolition and restoration activities. However, after the site is restored to its original state, there would be no significant effect to the transportation of the area.

Since the Morgan City, LA TARS Site is currently in cold storage, no utility services are operational. Therefore, no significant effect would occur to the utilities at the site under Alternative A. However, under implementation of this alternative, a significant amount of solid waste would be generated during the demolition process. All buildings, concrete, equipment, roads, etc would be properly handled, stored, transported, and disposed of in accordance with federal, state, and local laws and regulations prior to the transfer of the property. The production of this solid waste is only temporary and would not have a significant effect on the site following demolition.

### 4.4.3 ALTERNATIVE B

Under Alternative B, no direct or indirect effects to the infrastructure, transportation, or utilities would result from the property acquisition. The site does not currently have working utility services since it is in cold storage. There would be no change to either utility services or transportation routes in the area resulting from implementation of Alternative B.

### 4.4.4 ALTERNATIVE C

Under Alternative C, the Government would acquire ownership of the site through land condemnation. Since no construction or demolition procedures would occur under implementation of this alternative, there would be no effect to the infrastructure at the site.

### 4.4.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Under Alternative D (No-Action Alternative), the infrastructure would remain the same at the Morgan City, LA TARS Site. All buildings, roads, and parking lots would remain intact and would remain not used since the site employs no personnel, except contract grounds maintenance and security personnel that visit the site periodically. In addition, all utility services would remain inactive.

## 4.5 PHYSICAL RESOURCES

### 4.5.1 PROPOSED ACTION

*Geological Resources.* The Proposed Action involves returning the Morgan City, LA TARS Site to the landowner with all buildings and infrastructure remaining intact. Therefore, no earth-disturbing activities would take place that present the potential to affect the site’s topography,

soils, etc. Therefore, there would be no significant effect to the geological resources at the site under the Proposed Action.

*Water Resources.* No significant effect of surface or groundwater would occur under implementation of the Proposed Action. In addition, no other change in site discharge would result.

### 4.5.2 ALTERNATIVE A

*Geological Resources.* Alternative A would have no effect on the geological resources of the site, such as alteration of the topography or disturbance of geologic features. However, fence, road, and infrastructure removal would expose and disturb on-site soils, resulting in temporary exposure to wind and water erosion. Therefore, implementation of Alternative A may affect the site's soils.

Prior to construction of the Morgan City, LA TARS Site, a soil analysis was performed on the subject site. Appendix H contains a copy of this analysis. According to the site lease (Lease CS-I-92-012):

> "Upon termination of this Lease, and the removal of any and all such improvements, the Government or the Lessor shall perform, at the Government's expense, a similar soil analysis to determine the suitability of the soil for growing sugar cane or other commercial crops. In the event the soil is not suitable for growing sugar cane or other commercial crops, and it has been proven to be [solely] caused by the acts or omissions of the Government, the Government shall be responsible for restoring the condition of the soil as nearly as practicable to its original condition as of the Commencement Date of this Lease, in accordance with the provisions of the Federal Torts Claims Act, and the U.S. Government Lease for Real Property and its attachments GSA Forms 3517 and 3518."

Therefore, upon implementation of Alternative A, a soil analysis would be performed to ensure the soil is suitable for growing sugarcane or other commercial crops. If the soil is unsuitable, then the Government would restore the soil to its original condition, or as similar as possible.

To control erosion and discharge of sediment during the demolition process, the following objectives should be followed:

- <u>Minimize Disturbed Areas:</u> Only clear land that would be actively under demolition immediately, minimize disturbance during the rainy season, and avoid clearing and disturbing sensitive areas (e.g. step slopes and natural watercourses.)
- <u>Stabilize Disturbed Areas:</u> Provide temporary stabilization of disturbed soils whenever active demolition is not occurring at the site. Provide permanent stabilization during finish grade and landscape of the site. Various stabilization techniques include installing temporary vegetation, blankets and matting, mulch, sod, interceptor swales, diversion dikes, erosion control compost, mulch filter berms and socks, compost filter berms and socks, sand bag berms, silt fences, triangular filter

dikes, rock berms, hay bale dikes, brush berms, stone outlet sediment traps, and sediment basins.

- Protect Slopes and Channels: Convoy runoff from the top of slopes and stabilize disturbed slopes as soon as possible. In addition, avoid disturbing natural channels and stabilize any temporary or permanent channel crossings immediately.
- Control Site Perimeter: Delineate site perimeter to prevent disturbing areas outside the project limits.
- Retain Sediment: Retain sediment-laden water from disturbed, active areas within the site.

Following demolition activities, rehabilitation of the site would need to occur. Rehabilitation includes restoring the site to its original condition prior to the TARS Site being built. This would require replanting the site with vegetation native to the area. Following rehabilitation of the site, no significant effect to geological resources would result.

*Water Resources.* Surface water quality could be degraded during actual demolition of the site in the immediate area. The short-term effects come from possible erosion contributing to turbidity of runoff and possible contamination from spills or leaks from construction equipment. The contractor must utilize effective methods to control surface water runoff and minimize erosion. The contractor must obtain a Storm Water Pollution Prevention Permit prior to demolition activities. Appendix H provides more information on controlling runoff and erosion. Proper stabilization and seeding the site immediately upon completion of the demolition would provide beneficial vegetation, controlling erosion. Provided best management practices (BMPs) are utilized during demolition and site reclamation, negative surface water effects should be minimal.

### 4.5.3 ALTERNATIVE B

*Geological Resources.* Under Alternative B, no direct or indirect effects to geological and soil resources would result from the property acquisition because there would be no construction or soil-disturbing activities.

*Water Resources.* Under Alternative B, no direct or indirect effects to groundwater would result from the property acquisition because there would be no development that would adversely alter rainwater infiltration. In addition, no direct effects to water quality would result because there would be no restoration or construction activities.

### 4.5.4 ALTERNATIVE C

*Geological Resources.* Under implementation of Alternative C, there would be no change to the geological resources currently present at the Morgan City, LA TARS Site.

*Water Resources.* Since no demolition or construction activities would occur under this alternative, there would be no direct effects to the water resources present at the site.

### 4.5.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Under Alternative D (No-Action Alternative), no effects would occur to the geologic and water resources at the site. The topography, quality of soils, and the quality of surface and groundwater resources would remain the same since no changes would occur.

## 4.6 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

### 4.6.1 PROPOSED ACTION

Under implementation of the Proposed Action, the property would be returned to the landowner with all existing structures, utility systems, pavements, and fences remaining intact. Therefore, there would be no change to the hazardous materials present at the TARS Site.

### 4.6.2 ALTERNATIVE A

There are no asbestos-containing materials (ACMs) or other similar materials present at the Morgan City, LA TARS Site that could be released during demolition. The Final Environmental Baseline Survey (EBS) for the TARS Site, Morgan City, LA (August 2009) certified that the subject property does not have ACMs or equipment (Appendix F, page F-5). Any hazardous materials or waste that is discovered during the demolition process would need to be properly classified, handled, transported, and disposed of in accordance with federal, state, and local laws and regulations. There is the potential for lead-based paint (LBP) to be present in the paint on the concrete launching pad. If Alternative A were implemented, the contractor would be made aware of the potential that LBP is present. The contractor can then take the necessary actions to test the paint for lead content and, if needed, comply with Occupational Safety and Health Administration (OSHA) Regulation 29 CFR 1926.62 and Resource Conservation and Recovery Act (RCRA) Regulation 40 CFR 261.24. These regulations require handling the waste as hazardous if the lead content exceeds five milligrams per liter (mg/L). If the lead content does not exceed this amount, no special handling is required.

Another alternative to disposing of the LBP as a hazardous waste (if the lead content exceeds five mg/L) is to crush and recycle the concrete that contains the LBP. This alternative is less costly and conserves landfill space. Under implementation of Alternative A, recycling the concrete at the site would be a viable option. If this material were properly disposed of, there would be no significant effect under implementation of Alternative A. For additional information on recycling of concrete that contains LBP, see Appendix D.

### 4.6.3 ALTERNATIVE B

Under Alternative B, the property would be purchased by the Government, thus, no direct or indirect effects due to hazardous materials and wastes would result from the property acquisition.

### 4.6.4 ALTERNATIVE C

Under Alternative C, the property would be acquired by the Government through land condemnation. However, because there are no demolition or restoration activities that would occur, there would be no effects to hazardous materials and wastes under this alternative.

### 4.6.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

The Morgan City, LA TARS Site is not currently producing any hazardous materials or hazardous wastes, since the site is not operational. Therefore, no effect would occur if Alternative D (No-Action Alternative) were implemented. However, until demolition of the site occurs, it would be unknown if any LBP exists. Therefore, under this alternative, if LBP were present at the site it would remain intact. Since the site would remain in cold storage under this alternative, the potential for any spills of hazardous materials or waste would be nonexistent.

## 4.7 BIOLOGICAL RESOURCES

### 4.7.1 PROPOSED ACTION

*Terrestrial Communities and Wildlife.* Under the Proposed Action, all buildings and infrastructure would remain in-place at the Morgan City, LA TARS Site. Therefore, local wildlife species and vegetation currently seen at the site would experience no change.
*Wetlands and Floodplains.* There are wetlands present in the near vicinity of the Morgan City, LA TARS Site. In addition, the site is located within a 100-year floodplain. However, under implementation of the Proposed Action, there would be no change to these wetlands or floodplains from their current condition.

*Threatened, Endangered, and Special Status Species.* Under the Proposed Action, no demolition activities would occur. Therefore, implementation of this alternative would have no effect on the potential for threatened, endangered, or special status species to occur at the site.

### 4.7.2 ALTERNATIVE A

*Terrestrial Communities and Wildlife.* BMPs and control measures, including silt fences, covering of stockpiles, and keeping demolition equipment on the road and graveled areas would be implemented to ensure that effects to biological resources would be kept to a minimum. The amount of vegetation disturbed would be kept to the minimum required to complete the action. Disturbed areas should be reestablished. There would be a short-term minimal loss of vegetation from construction activities. However, following demolition, restoration of the site would occur, which includes seeding and revegetation of the area. The site would return to conditions similar to those that existed prior to construction of the TARS facility. The long-term effect to the vegetation of the area is considered positive since its natural condition would be restored.

Wildlife species may be affected in the short-term during demolition activities. However, long-term effects would be beneficial to wildlife species since the site would be reseeded to its original state. This would open up habitat for a variety of species.

*Wetlands and Floodplains.* Wetlands do exist in the near vicinity of the Morgan City, LA TARS Site. Equipment for the demolition and restoration process cannot be stored in the wetlands, which would thereby cause rutting and destruction of vegetation. All activity must be kept out of these areas. Equipment will be stored on the Site and vehicles will use established roadways. Activity in any wetlands cannot occur without a Clean Water Act (CWA) Section 404 permit from the Army Corps of Engineers. No dumping, filling, dredging, or changing of the wetland hydrologic structure is permitted without a permit; none of these activities would be done under Alternative A.

The Morgan City, LA TARS Site is located within a 100-year floodplain. Therefore, the potential exists for adverse effects to occur to this floodplain during demolition and restoration activities. Due to the TARS Site being located within a floodplain and because of the Terms of the Addendum to the U.S. Government Lease dated August 1, 1992, a Finding of No Practicable Alternative (FONPA) was prepared as part of this project that states there is no practicable alternative to the demolition and restoration activities presented in Alternative A. The lease termination provision provides that upon termination and property transfer, the landowner (Glencoe-Vacherie Plantation, LTD) may demand the Air Force to remove the improvements and restore the property to its original condition as near as practicable. Therefore, the Air Force must analyze Alternative A activities, as designed, to remove or demolish improvements and restore the leased property, and, consider all practicable measures to minimize harm to the floodplain.

*Threatened, Endangered, and Special Status Species.* The Morgan City, LA TARS Site is located within Louisiana black bear critical habitat and is approximately 1,500 feet from breeding habitat. If implementation of this alternative would occur, the USFWS is concerned that an adverse effect to nearby black bear populations would occur (Appendix A). If site demolition and restoration is to be performed, it is necessary to contact the USFWS prior to any demolition activities to prevent or minimize effects to the black bear populations.

### 4.7.3 ALTERNATIVE B

*Terrestrial Communities and Wildlife.* Under Alternative B, no direct effects to vegetation or wildlife would result from the property acquisition because there would be no vegetation disturbing activities such as construction or restoration efforts.

*Wetlands and Floodplains.* Under Alternative B, no direct effects to wetlands would result from the property acquisition because there would be no construction activities. In addition, no direct effects to floodplains would result because there would be no activities taking place within the floodplain associated with Alternative B.

*Threatened, Endangered, and Special Status Species.* Coordination was undertaken with both the USFWS and the Louisiana Department of Wildlife and Fisheries (Appendix A). Both

agencies have determined that implementation of Alternative B would not adversely affect any federally threatened or endangered species or their critical habitat. Thus, no direct or indirect effects to federal—or state-listed threatened or endangered species would result from the property acquisition.

### 4.7.4 ALTERNATIVE C

*Terrestrial Communities and Wildlife.* There would be no change to the terrestrial communities and wildlife under implementation of Alternative C. Any vegetation or wildlife currently at the site is likely to remain present.

*Wetlands and Floodplains.* The Morgan City, LA TARS Site is located within a 100-year floodplain and many wetlands are located in the near vicinity of the site. However, because no construction or earth-disturbing activities would occur under this alternative, there would be no effects to the wetlands and floodplains present at or near the site.

*Threatened, Endangered, and Special Status Species.* There would be no likely change to the presence of threatened, endangered, or special status species at the site under implementation of Alternative C.

### 4.7.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

The status of wildlife and threatened and endangered species at the Morgan City, LA TARS Site would not be affected under Alternative D (No-Action Alternative). Any wildlife species that habituates the site is likely to remain present following implementation of this alternative.

Wetlands are present near the site, but would not be affected under Alternative D (No-Action Alternative). In addition, all vegetation that is currently intact at the site would remain the same.

## 4.8 AIR QUALITY

The Clean Air Act (CAA) prohibits federal agencies from supporting activities that do not conform to a State Implementation Plan (SIP) that has been approved by the Environmental Protection Agency (EPA). To assess the effects of the Alternative A proposal (complete demolition of all buildings and infrastructure), analysis must include direct and indirect emissions from all activities that would affect the regional air quality. Emissions from proposed actions are either “presumed to conform” (based on emission levels which are considered insignificant in the context of overall regional emissions) or must demonstrate conformity with approved SIP provisions.

### 4.8.1 PROPOSED ACTION

The implementation of the Proposed Action would not have any negative effects on the regional air quality because it does not include any demolition activities. In addition, there are no commuting personnel at the site; therefore, there would be no contribution to any air pollution.

### 4.8.2 ALTERNATIVE A

If Alternative A were implemented, negligible amounts of particulate matter ($PM_{10}$) would affect air quality at the Morgan City, LA TARS Site, as shown below in Table 4-1. Effects to air quality associated with demolition activities would be short-term and contribute less than one percent to the regional air emissions, thereby not presenting any significant adverse effects to regional air quality.

**Table 4-1**
**Air Emissions for Implementation of Alternative A**

| Name | Size | CO | $NO_x$ | $SO_2$ | VOC | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|---|
| Operations Building (Building 001) | 54,000 $ft^3$ | 0 | 0 | 0 | 0 | 0.11 | 0 |
| Vehicle Maintenance Building (Building 002) | 12,000 $ft^3$ | 0 | 0 | 0 | 0 | 0.023 | 0 |
| Payload Service Building (Building 003) | 60,000 $ft^3$ | 0 | 0 | 0 | 0 | 0.12 | 0 |
| Electrical Power Station Building (Building 045) | 3,285 $ft^3$ | 0 | 0 | 0 | 0 | 0.0062 | 0 |
| Hazardous Waste Building (Building 006) | 768 $ft^3$ | 0 | 0 | 0 | 0 | 0.0014 | 0 |
| Mechanical Building (Building 005) | 1,280 $ft^3$ | 0 | 0 | 0 | 0 | 0.0025 | 0 |
| Security Building (Building 004) | 1,600 $ft^3$ | 0 | 0 | 0 | 0 | 0.0032 | 0 |
| **TOTAL** | **N/A** | **0** | **0** | **0** | **0** | **0.2663** | **0** |

*Source: ACAM, 2009*

The emissions associated with Alternative A activities include: (1) fugitive dust ($PM_{10}$) from any demolition, fill, and grading; and (2) combustion (primarily CO and $NO_x$, and smaller amounts of VOCs, $SO_x$, and $PM_{10}$) from heavy-duty diesel construction/demolition equipment exhaust (e.g., trucks, dozers, cranes, and rollers).

Applicable demolition emissions were calculated using the Air Force (AF) Air Conformity Applicability Model (ACAM), Version 4.4.14 software (AFCEE 2009). ACAM is a computer model used by AF planners and Environmental Impact Analysis Process (EIAP) personnel to determine general conformity applicability for proposed federal actions in nonattainment or maintenance designated areas. The model provides for a uniform, acceptable, and automated tool for AF use. ACAM produces an estimate of the conformity-related emissions providing sufficient detail for a conformity applicability analysis, and a jumping platform for a refined analysis and a formal conformity determination. Appendix J provides screenshots of the ACAM input data used to calculate these emissions. Based on emission levels that are considered insignificant in the context of overall regional emissions, Alternative A demonstrates conformity with Louisiana approved SIP provisions.

### 4.8.3 ALTERNATIVE B

Under implementation of Alternative B, no direct effects to air quality would result from the property acquisition because there would be no construction or soil disturbing activities.

### 4.8.4 ALTERNATIVE C

There would be no change to the air quality of the site under implementation of Alternative C.

### 4.8.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

No significant effects would occur upon implementation of Alternative D (No-Action Alternative). Because the site would remain in cold storage, no additional employees would be employed at the site, nor would there be any additional operation of machinery at the site. Therefore, air quality would not be affected through commuting of vehicles or operation of machinery under Alternative D (No-Action Alternative).

## 4.9 AIRSPACE

### 4.9.1 PROPOSED ACTION

Under implementation of the Proposed Action, Restricted Area R-3780, would no longer be needed by the Air Force and would be removed.

### 4.9.2 ALTERNATIVE A

Under implementation of Alternative A, the Restricted Area R-3780, would no longer be needed and would be removed.

### 4.9.3 ALTERNATIVE B

Under Alternative B, air space ownership would remain the same.

### 4.9.4 ALTERNATIVE C

Under Alternative C, air space ownership would remain the same.

### 4.9.5 ALTERNATIVE D (NO-ACTION ALTERNATIVE)

Under Alternative D (No-Action Alternative), air space ownership would remain the same.

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# 5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

## 5.1 CUMULATIVE EFFECTS

This chapter provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

### 5.1.1 DEFINITION OF CUMULATIVE EFFECTS

The Council on Environmental Quality (CEQ) regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental effects resulting from "the incremental effects of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other action" (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Impacts* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the Proposed Action. The scope must consider geographic and temporal overlaps among the Proposed Action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the Proposed Action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, this EA addresses three questions:

1. Does a relationship exist such that elements of the Proposed Action might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the Proposed Action and another action could be expected to interact, would the Proposed Action affect or be affected by effects of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant effects not identified when the Proposed Action is considered alone?

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the Proposed Action and Alternative D (No-Action Alternative) in this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the Proposed Action and Alternative D (No-Action Alternative).

### 5.1.2 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the Proposed Action, Alternative A, Alternative B, Alternative C, and Alternative D (No-Action Alternative), but also the incremental contribution of past, present, and reasonably foreseeable actions.

*Past and Present Actions Relevant to the Proposed Action and Alternatives.* The Louisiana Department of Transportation (LADoT) has three projects currently taking place or taking place in the near future in St. Mary Parish. The first is a construction project to recondition the bridges located on Louisiana Highway 82, 86, 320, 344, and 3069. The primary purpose of this project is to convert the conventional end wedge system currently on the bridges with a roller wedge system. The estimated completion date on this project was August 2008; however, this project is still ongoing. This project could affect the TARS Site, depending on the extent of construction and the types of materials used. In addition, there could be an increase in the traffic on these highways. However, the Morgan City, LA TARS Site is not located immediately near these highways; therefore, the site should not experience a change in its traffic.

The other two projects to occur in the near future are the cold plane, patch, and overlay of Louisiana Highway 87 and 317. These projects are to occur around April 2010. Louisiana Highway 87 is located approximately 6 miles northeast of the TARS Site. Therefore, construction at this highway could affect the site. As part of this construction, roadway resurfacing would take place, which could involve the use of asphalt. Asphaltic overlay may cause unfavorable odors to be present within the project area. However, these cumulative effects would be considered insignificant.

*Reasonably Foreseeable Future Actions.* The AF is presently considering demolition and restoration of the Matagorda, TX TARS Site, which is located in Matagorda County, Texas. If this action is implemented, it could occur near the same time as the Proposed Action.

## 5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable resource commitments refer to the use of nonrenewable resources and the effects that use of these resources would have on future generations. The irreversible and irretrievable commitment of resources that would result from implementation of the Proposed Action involves the irretrievable commitment of fossil fuels, the consumption of energy resources, and human labor resources.

*Energy Resources.* There would be no energy resources used under implementation of the Proposed Action because the site would remain in its current condition and simply be returned to the landowner. Any energy resources (such as petroleum based products, diesel, etc) that would be used in demolition or other similar activities, would not be used under the Proposed Action.

*Human Resources.* The use of human resources for activities involved in the Proposed Action is considered an irretrievable loss because it prevents personnel from engaging in other work

activities. However, the only personnel needed for implementation of the Proposed Action is the personnel that would prepare the termination of lease agreement.

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# 7.0 REFERENCES

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# Appendix A
# Scoping Letters

## Morgan City, Louisiana Tethered Aerostat Radar System (TARS) Site Mailing List

United States Fish and Wildlife Service
Lafayette Ecological Services Field Office
646 Cajundome Boulevard, Suite 400
Lafayette, LA  70506-4290

United States Department of Agriculture
1400 Independence Avenue, Southwest
Washington, DC  20250

Louisiana Department of Wildlife and Fisheries
200 Quail Drive
Baton Rouge, LA 70808

Louisiana Department of Environmental Quality
602 N. Fifth Street
Baton Rouge, LA  70802

Louisiana Office of Historic Preservation
Capitol Annex Building
1051 N. Third Street
Baton Rouge, LA  70802

Louisiana Department of Natural Resources
P.O. Box 94275
Baton Rouge, LA  70804-9275

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*Bulverde, Texas 78163*
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EES

October 13, 2009

Louisiana Department of Historic Preservation
Capitol Annex Building
1051 N. Third Street
Baton Rouge, LA 70802

Dear Sir/Madam,

Environmental Express Services, Inc (EES) has been retained to prepare an Environmental Assessment (EA) for a proposed action by the Air Force. This action would occur at the Morgan City Tethered Aerostat Radar System (TARS) Site that is located approximately 40 miles west of Morgan City, Louisiana, and 2 miles north of Glencoe, a rural community. The site is accessible from Louisiana State Highway 83 and is connected by a paved access road. The property is located at a latitude of 29° 48' 30" and a longitude of 91° 39' 40". The TARS Site is located within a 1,200.3-acre tract of land lying wholly within Ward 2, District 1, St. Mary Parish, Louisiana.

The U.S. Air Force Air Combat Command assumes responsibility of the Morgan City TARS Site. This site is one of a series of similar sites that stretch along the southern coast of the United States. The purpose of these systems is to detect smuggling operations approaching the coast. The Morgan City TARS Site became active in 1992. In 2002, however, the site closed and was deactivated.

Under this proposed action, the U.S. Air Force Air Combat Command would vacate the leased property formerly used as the Morgan City TARS Site. The property would be returned to the landowner with the existing structures, utility systems, pavements, and fences remaining intact.

We are in the data-gathering process for the preparation of the EA. We would appreciate any cultural resource information you may have for the site, especially the presence of any historic, prehistoric, or sensitive areas within the site. Enclosed is a map of the Morgan City TARS Site for your use. In addition, if you have any comments/questions concerning potential environmental impacts, please provide your comments to me within 30 days of receipt of this letter. If you have any questions, please feel free to contact me at (830) 980-1830. Thank you for your assistance.

Sincerely,

Jackie Baerwald

Jackie Baerwald
Environmental Scientist

1 Enclosure
Map of Morgan City TARS Site

***ENVIRONMENTAL EXPRESS SERVICES, INC.***
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*Bulverde, Texas 78163*
*Telephone 830-980-1830 Fax 830-980-1831*
*www.envexpress.com*

October 13, 2009

Louisiana Department of Environmental Quality
602 N. Fifth Street
Baton Rouge, LA 70802

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October 13, 2009

Louisiana Department of Wildlife and Fisheries
200 Quail Drive
Baton Rouge, LA 70808

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October 13, 2009

Louisiana Department of Natural Resources
P.O. Box 94275
Baton Rouge, LA 70804-9275

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October 13, 2009

U.S. Department of Agriculture
Natural Resources Conservation Service
Louisiana State Office
3737 Government Street
Alexandria, LA 71302

Dear Sir/Madam,

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October 13, 2009

U.S. Fish and Wildlife Service
Lafayette Ecological Services Field Office
646 Cajundome Boulevard, Suite 400
Lafayette, LA 70506-4290

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October 13, 2009

Louisiana Department of Historic Preservation
Capitol Annex Building
1051 N. Third Street
Baton Rouge, LA 70802

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Scott Hutcheson 11-4-09
Scott Hutcheson Date

Dear Sir/Madam,

Environmental Express Services, Inc (EES) has been retained to prepare an Environmental Assessment (EA) for a proposed action by the Air Force. This action would occur at the Morgan City Tethered Aerostat Radar System (TARS) Site that is located approximately 40 miles west of Morgan City, Louisiana, and 2 miles north of Glencoe, a rural community. The site is accessible from Louisiana State Highway 83 and is connected by a paved access road. The property is located at a latitude of 29° 48' 30" and a longitude of 91° 39' 40". The TARS Site is located within a 1,200.3-acre tract of land lying wholly within Ward 2, District 1, St. Mary Parish, Louisiana.

The U.S. Air Force Air Combat Command assumes responsibility of the Morgan City TARS Site. This site is one of a series of similar sites that stretch along the southern coast of the United States. The purpose of these systems is to detect smuggling operations approaching the coast. The Morgan City TARS Site became active in 1992. In 2002, however, the site closed and was deactivated.

Under this proposed action, the U.S. Air Force Air Combat Command would vacate the leased property formerly used as the Morgan City TARS Site. The property would be returned to the landowner with the existing structures, utility systems, pavements, and fences remaining intact.

We are in the data-gathering process for the preparation of the EA. We would appreciate any cultural resource information you may have for the site, especially the presence of any historic, prehistoric, or sensitive areas within the site. Enclosed is a map of the Morgan City TARS Site for your use. In addition, if you have any comments/questions concerning potential environmental impacts, please provide your comments to me within 30 days of receipt of this letter. If you have any questions, please feel free to contact me at (830) 980-1830. Thank you for your assistance.

Sincerely,

Jackie Baerwald

Jackie Baerwald
Environmental Scientist

1 Enclosure
Map of Morgan City TARS Site

OCT 16 2009

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

| | |
|---|---|
| ***Date*** | October 26, 2009 |
| ***Name*** | Jackie Baerwald |
| ***Company*** | Environmental Express Services, Inc. |
| ***Street Address*** | 5944 FM 1863 |
| ***City, State, Zip*** | Bulverde, TX 78163 |
| ***Project*** | Morgan City Tars Site |
| ***Project ID*** | 4072009 |
| ***Invoice Number*** | 09102606 |

Personnel of the Habitat Section of the Coastal & Non-Game Resources Division have reviewed the preliminary data for the captioned project.

Please note that the Louisiana black bear (Ursus americanus luteolus) may occur in your general project area and is provided a threatened status on both federal and state species lists. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,

Gary Lester

Gary Lester, Coordinator
Natural Heritage Program

P.O. BOX 98000 • BATON ROUGE, LOUISIANA 70898-9000 • PHONE (225) 765-2800
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GOVERNOR

# State of Louisiana
## DEPARTMENT OF NATURAL RESOURCES
## OFFICE OF CONSERVATION

SCOTT A. ANGELLE
SECRETARY

JAMES H. WELSH
COMMISSIONER OF CONSERVATION

October 29, 2009

TO: Ms. Jackie Baerwald, Environmental Scientist
Environmental Express Services, Inc.
5944 FM 1863
Bulverde, Texas 78163

RE: Environmental Assessment (EA)
Morgan City TARS Site, U.S. Air Force
St. Mary Parish, Louisiana

Dear Ms. Baerwald:

In response to your letter dated October 13, 2009, concerning the referenced matter, please be advised that the Office of Conservation collects and maintains many types of information regarding oil and gas exploration, production, distribution, and other data relative to the petroleum industry as well as related and non-related injection well information, surface mining and ground water information and other natural resource related data. Most information concerning oil, gas and injection wells for any given area of the state, including the subject area of your letter can be obtained through records search via the SONRIS data access application available at:

http://www.dnr.state.la.us/CONS/Conserv.ssi

A review of our computer records for the referenced area indicates no oil, gas, injection or water wells located within and adjacent to the area. Due care should be taken to locate any water wells installed before registration was required.

The Office of Conservation maintains records of all activities within its jurisdiction in either paper, microfilm or electronic format. These records may be accessed during normal business hours, Monday through Friday, except on State holidays or emergencies that require the Office to be closed. Please call 225-342-5540 for specific contact information or for

Post Office Box 94275 • Baton Rouge, Louisiana 70804-9275 • 617 North 3rd Street • 9th Floor • Baton Rouge, Louisiana 70802
(225) 342-5540 • Fax (225) 342-3705 • www.dnr.state.la.us/conservation
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directions to the Office of Conservation, located in the LaSalle Building, 617 North Third Street, Baton Rouge, Louisiana. For pipelines and other underground hazards, please contact Louisiana One Call at 1-800-272-3020 prior to commencing operations. Should you need to direct your inquiry to any of our Divisions, you may use the following contact information:

| Division | Contact | Phone No. | E-mail Address |
|---|---|---|---|
| Engineering | Jeff Wells | 225-342-5638 | JeffW@dnr.state.la.us |
| Pipeline | Steven Giambronne | 225-342-2989 | StevenG@dnr.state.la.us |
| Injection & Mining | Laurence Bland | 225-342-5515 | LaurenceB@dnr.state.la.us |
| Geological | Mike Kline | 225-342-3335 | MikeKl@dnr.state.la.us |
| Ground Water | Tony Duplechin | 225-342-5528 | TonyD@dnr.state.la.us |

If you have difficulty in accessing the data via the referenced website because of computer related issues, you may obtain assistance from our technical support section by selecting "Help" on the SONRIS tool bar and submitting an email describing your problems and including a telephone number where you may be reached.

Sincerely,

James H. Welsh

James H. Welsh
AR Commissioner of Conservation

JHW:MBK

**United States Department of Agriculture**

NRCS

Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302

(318) 473-7795
Fax: (318) 473-7750

November 12, 2009

Ms. Jackie Baerwald
Environmental Specialist
Environmental Express Services, Inc.
5944 FM 1863
Bulverde, Texas 78163

Dear Ms. Baerwald:

RE: **ENVIRONMENTAL ASSESSMENT**
**MORGAN CITY TETHERED AEROSTAT RADAR SYSTEM (TARS)**
**GLENCOE**
**ST. MARY PARISH, LOUISIANA**

This site would not be subject to the Farmland Protection Policy Act (FPPA) since it was constructed for National Defense purposes. Thus, the abandonment and return of the site to the landowner will have no impact on FPPA, except to, perhaps, increase farmland.

NRCS has no objection to the proposed de-activation of the site. Further, it does not appear that it will impact any NRCS on-going or proposed work in the area.

Should you have questions regarding the above comments, please feel free to contact Patra Ghergich, District Conservationist, in our Franklin Field Office, at phone number (337) 828-1461, Ext. 3.

Sincerely,

E.J. "Ed" Giering III, P.E.
State Conservation Engineer

cc: Patra Ghergich, District Conservationist, NRCS, Franklin, Louisiana

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

November 10, 2009

Ms. Jackie Baerwald
Environmental Express Services, Inc.
5944 FM 1863
Bulverde, TX 78163

Dear Ms Baerwald:

Please reference your October 13, 2009, letter requesting our review of the proposed action by the U.S. Airforce Air Combat Command, vacating the leased property formerly used as the Morgan City TARS Site, located approximately 40 miles west of Morgan City, St. Mary Parish, Louisiana. The U.S. Fish and Wildlife Service (Service) has reviewed the information you provided, and offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The proposed project site may be located within threatened Louisiana black bear (*Ursus americanus luteolus*) critical habitat and is approximately 1,500 feet from breeding habitat. According to your letter, the property would be returned to the landowner with the existing structures, utility systems, pavements, and fences remaining intact. However, in an October 20, 2009, telephone conversation with Heather Dyer of the Service, it was stated that demolition of all buildings on the property is an alternate plan being considered. No significant adverse impacts to Louisiana black bears or their breeding habitat is anticipated if the property is returned to the landowner in its current state with no demolition occurring. However, if demolition is chosen as the appropriate course of action for your project, then the Service would be concerned about possible disturbance to nearby Louisiana black bear populations.

The threatened Louisiana black bear (*Ursus americanus luteolus*) is primarily associated with forested wetlands; however, it utilizes a variety of habitat types, including marsh, spoil banks, and upland forests. Within forested wetlands, black bear habitat requirements include soft and hard mast for food, thick vegetation for escape cover, vegetated corridors for dispersal, large trees for den sites, and isolated areas for refuge from human disturbance. Remaining Louisiana black bear populations occur in the Tensas River Basin, the Upper Atchafalaya River Basin, and coastal St. Mary and Iberia Parishes. The primary threats to the species are continued loss of bottomland hardwoods

TAKE PRIDE IN AMERICA

and fragmentation of remaining forested tracts. In addition to habitat loss, human-bear conflicts are a major threat to the conservation and protection of the Louisiana black bear. Human-caused losses include collisions with automobiles, intentional or illegal killing, and removal from the wild which is necessary when bears that have become habituated to human attractants pose a risk to public health or safety.

Louisiana black bears, particularly pregnant females, normally den from December through April. Preferred den sites include bald cypress and water-tupelo trees with visible cavities, that have a diameter at breast height of 36 inches or greater, and which occur in or along rivers, lakes, streams, bayous, sloughs, or other water bodies. In areas where suitable den trees are uncommon, Louisiana black bears often den in shallow burrows or depressions within areas of dense cover. In order to avoid disturbance of denning bears and possible abandonment of cubs, the Service recommends that any work in the project area be prohibited during the denning season. To further protect denning bears, the Service (through the final listing rule published on January 7, 1992, in Volume 57, No. 4 of the Federal Register), has extended legal protection to actual or candidate den trees. As the terms imply, "actual den tree" refers to any tree used by a denning bear during the winter and early spring seasons. Candidate den trees are defined in the final rule as bald cypress (*Taxodium distichum*) and tupelo gum (*Nyssa* sp.) with visible cavities, having a diameter at breast height of 36 inches or greater, and occurring in or along rivers, lakes, streams, bayous, sloughs, or other water bodies. Results of recent research involving Louisiana black bears indicate that they will use virtually any species of tree for a den site if it is large enough and has a cavity, as described above.

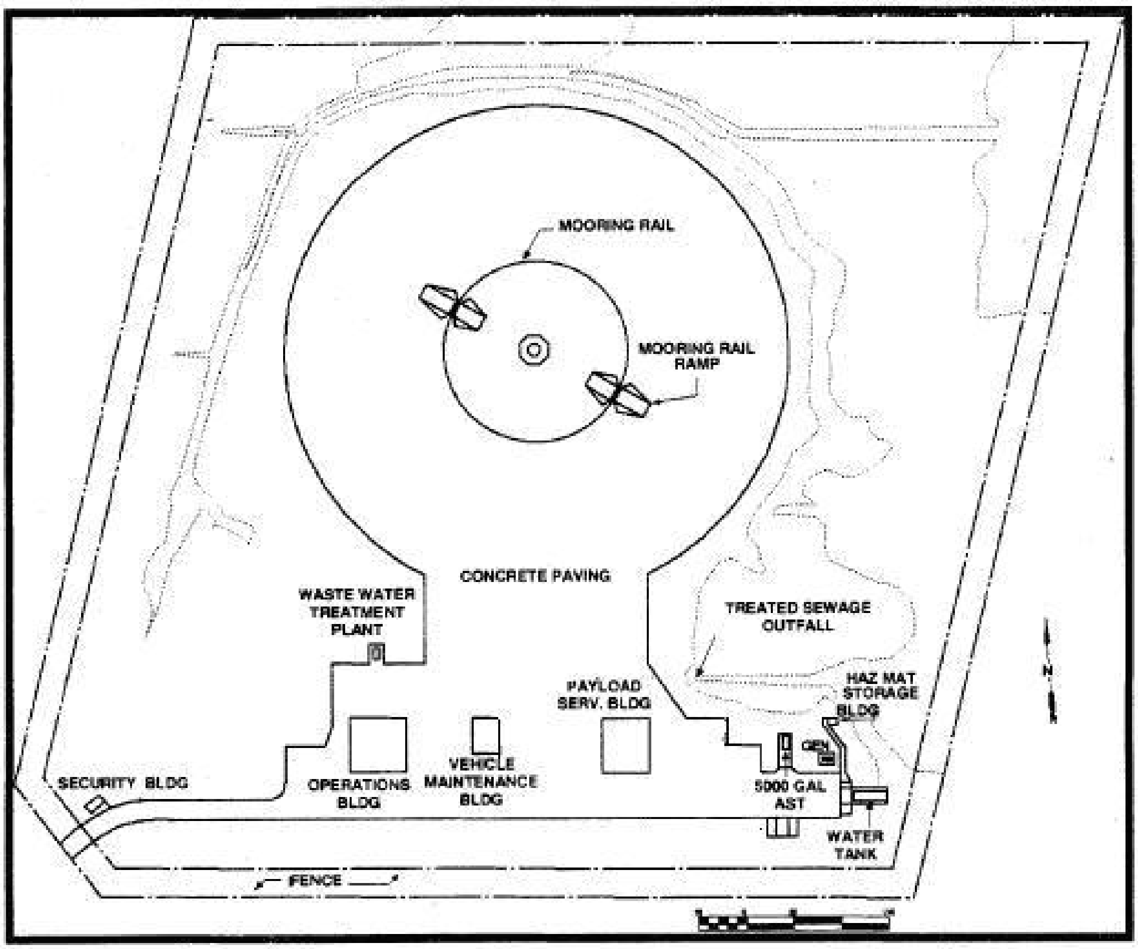
If site demolition is to be performed during the denning season, further consultation with this office may be necessary.

The Service strongly urges employees and contractors to avoid bears, if at all possible. Bears will typically avoid humans; however, with this type of activity and its encroachment into occupied habitat, sightings of bears may occur. Once bears become habituated to human food sources, especially garbage, it becomes difficult, if not impossible, to control their nuisance behavior. In such cases, the alternatives are to remove the animal from the wild (i.e., place it in a zoo) or destroy the animal. The most effective mechanism to reduce nuisance behavior and human-bear conflicts is to eliminate attractants (e.g., garbage, human food wastes, pet/livestock feeds, etc.); in the long-term, this has also proven to be the most cost-effective and beneficial approach. Therefore, in order to prevent sightings from turning into confrontations, workers should be cautioned to not leave food or garbage in the field.

We appreciate the opportunity to provide comments in the planning stages of this proposed project. If you need further assistance, please contact Heather Dyer (337/291-3129) of this office.

# Appendix B
# Site Photographs

## SITE PHOTOGRAPHS




**LEGEND**

Building 001: Operations Building
Building 002: Vehicle Maintenance Building
Building 003: Payload Service Building
Building 004: Security Building
Building 005: Mechanical Building
Building 006: Hazardous Material Building
Building 045: Electrical Power Station Building

Photograph 1:  Guard House and Entry to the TARS Site

Photograph 2:  Closer view of the Guard House and Entry to the TARS Site

Photograph 3: South entrance to the Operations Building #001.

Photograph 4:  South wall of Operations Building #001, Mechanical Building #005 and the crane vehicle next to the Payload Service Building #003.

Photograph 5:  North wall of the Operations Building #001.

Photograph 6:  North side of Mechanical Building #005 and Operations Building #001.

Photograph 7: East wall of the Operations Building #001 showing air conditioning units and transformer box. Guard house is in background.


Photograph 8: Transformer outside the Operations Building #001; east wall shown above.

Photograph 9: Flammable storage cabinet in the Operations Building #001.


Photograph 10: Contents of the cabinet shown in photograph #9.

Photograph 11:  Eyewash stored in the Operations Building #001.


Photograph 12:  Work tables located in Operations Building #001.

Photograph 13. Control center panel. Equipment removed. Located in the Operations Building #001.

Photograph 14: Kitchen area of the Operations Building #001.

Photograph 15: Additional view of kitchen area in the Operations Building #001.

Photograph 16:  Under cabinet contents in kitchen.

Photograph 17:  Storage located in the Operations Building #001.


Photograph 18:  Storage cabinets in Operations Building #001.

Photograph 19:  Additional storage of equipment and supplies in Operations Building #001.


Photograph 20:  Supplies stored in Operations Building #001.

Photograph 21:  Desk area in Operations Building #001.

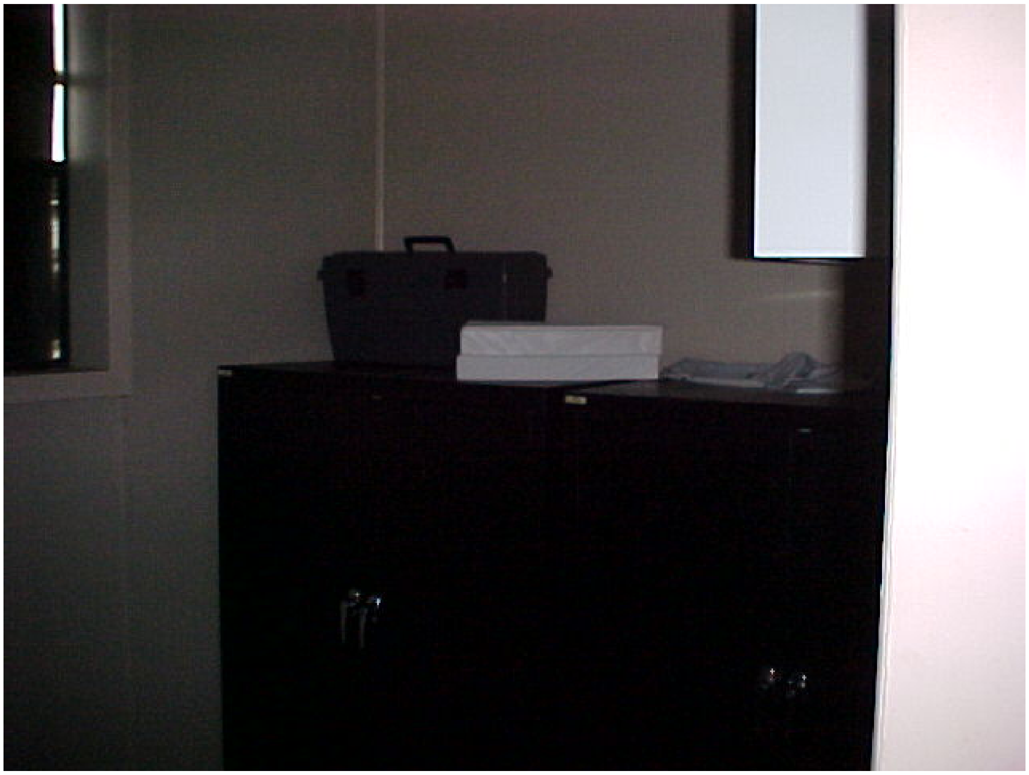
Photograph 22:  Fax machine and equipment in Operations Building #001.

Photograph 23: Files in the Operations Building #001.


Photograph 24:  Binders and manuals located in the Operations Building #001.


Photograph 25:  Additional desk areas in Operations Building #001.


Photograph 26:  Another desk area in Operations Building #001.



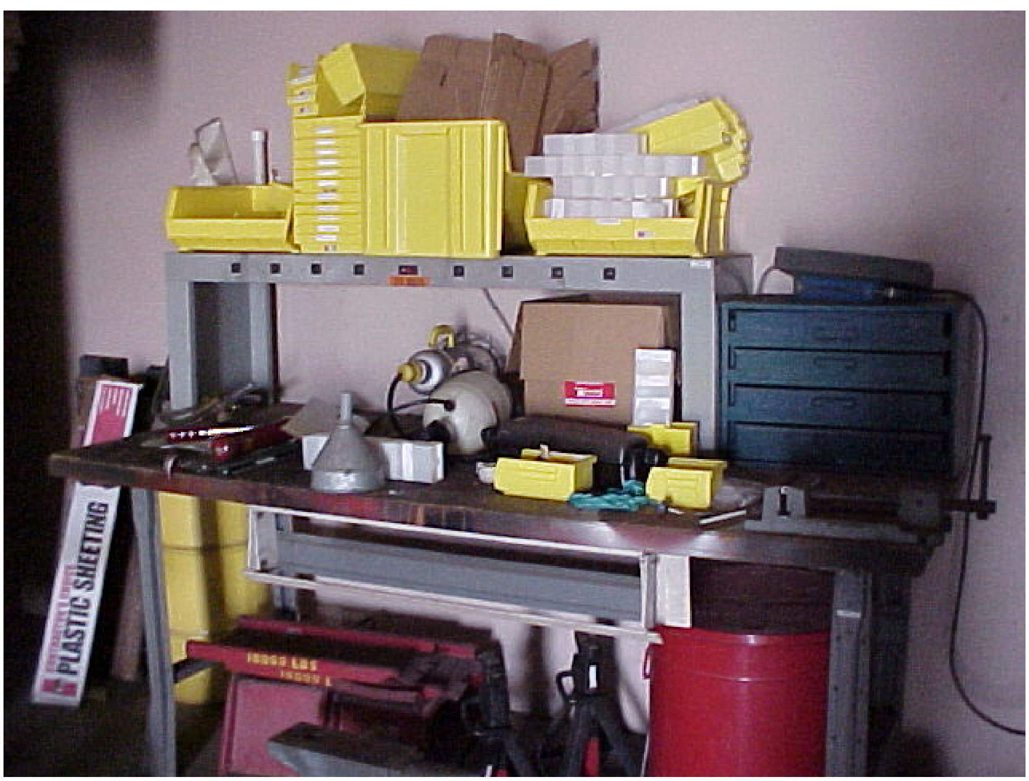
Photograph 27: Storage cabinets in Operations Building #001.

Photograph 28:  Personnel storage lockers in the Operations Building #001.

Photograph 29: Mechanical Building #005, Payload Service Building #003, and crane vehicle.

Photograph 30: North side of Payload Service Building #003 and Mechanical Building #005 looking southward.

Photograph 31:  North side of Mechanical Building #005 and Operations Building #001.




Photograph 32:  Miscellaneous equipment found in the Mechanical Building #005.

Photograph 33: Drill press located in Mechanical Building #005.


Photograph 34: Various equipment, parts, and old cathode ray tube monitors in the Mechanical Building #005.


Photograph 35: Parts located in a cabinet in the Mechanical Building #005.


Photograph 36: Various tools located in a cabinet in the Mechanical Building #005.

Photograph 37:  Oversized wrenches of various sizes. Mechanical Building #005.

Photograph 38:  Additional tools in the Mechanical Building #005.

Photograph 39:  Some more tools. Mechanical Building #005.


Photograph 40: Miscellaneous maintenance items.  Enviro-wash cleaner degreaser, Windex, weed trimmer lines, etc. Mechanical Building #005.


Photograph 41:  Various tools and cleaning equipment. Mechanical Building #005.


Photograph 42.  Tool chest located in the Mechanical Building #005.

Photograph 43.  Storage shelving components stored in the Mechanical Building #005.

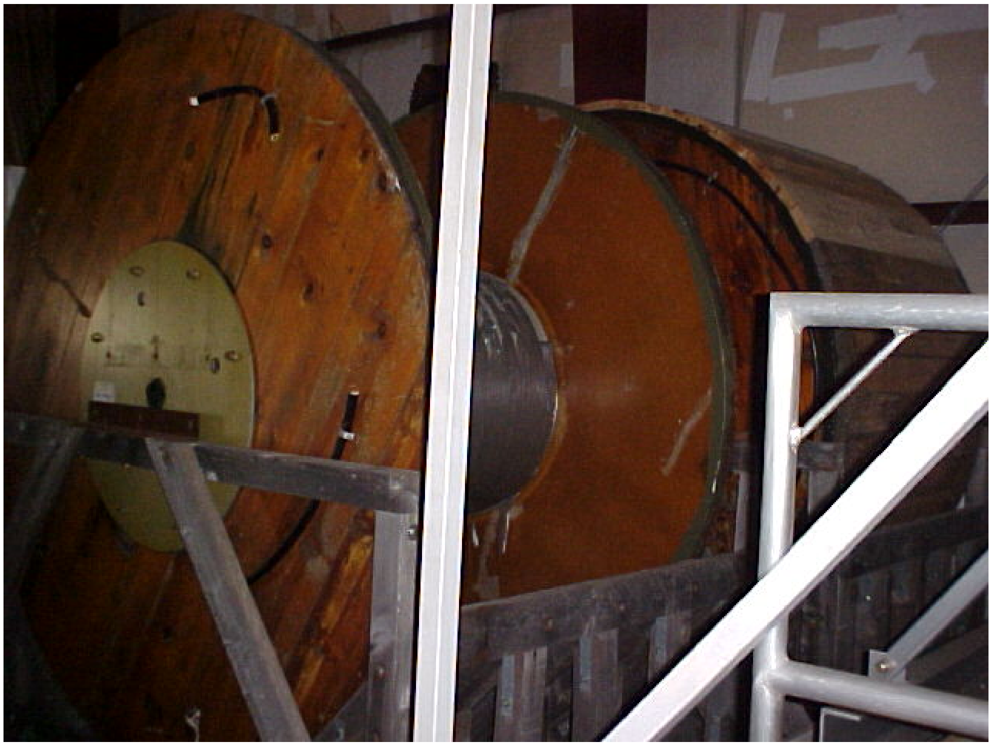
Photograph 44.  Flammable storage cabinet in Mechanical Building #005 with  nearly empty bottles of methyl ethyl ketone.

Photograph 45:  Jack and portable generator stored in the Mechanical Building #005.


Photograph 46: North side of the Payload Service Building #003.

Photograph 47: West-facing wall of the Payload Service Building #003 and the vehicle crane used for balloon maintenance.

Photograph 48:  Compressed cylinder storage in Payload Service Building #003. Oxygen, nitrogen, sulfur hexafluoride, and breathing air.



Photograph 49:  Large cable reels for the tether.  Payload Service Building #003.

Photograph 50: Miscellaneous furniture and equipment. Payload Service Building #003.

Photograph 51: Additional view of Payload Service Building #003 interior. Roofed structure was used to perform maintenance on the balloon while outside. It was lifted by crane into position.

Photograph 52: Staining visible on the concrete in Payload Service Building #003. This is located underneath and in front of the compressed cylinder storage. No leakage apparent at the time of site visit. Cause of stain not established. No cracks in the concrete were apparent to suggest contamination to soil.

Photograph 53: Rubbish piles in the Payload Service Building #003.


Photograph 54: Acetylene cylinders located in Payload Service Building #003.

Photograph 55: Hazardous Materials Building #006 exterior. View is looking east.

Photograph 56: Interior view of the Hazardous Materials Building #006. These five-gallon containers were either partially full or full. View is looking east.

Photograph 57: Empty flammables storage cabinet inside the Hazardous Materials Building #006. View looking east.

Photograph 58: Interior view of the Hazardous Materials Building #006. These storage cans were empty. View looking north.


Photograph 59: Interior of the Hazardous Materials Building #006. Methyl ethyl ketone wipe containers (empty) located in flammables cabinet. View looking south.

Photograph 60: Pump House and the 20,000-gallon water storage tank for firefighting.

Photograph 61: Interior of the Pump House and pump equipment.

Photograph 62:  West-facing wall of Pump House.  View is looking east.

Photograph 63: Generator Enclosure and generator. Yellow aboveground fuel line can be seen underneath the enclosure.


Photograph 64: Generator located in the Generator Enclosure.


Photograph 65: Transformers located in the Generator Enclosure.

Photograph 66: Diesel Fuel Storage (4,750-gallon capacity), and secondary containment structure. Note aboveground fuel line in center right of the photograph.

Photograph 67: Front of secondary containment structure (blue), and the yellow aboveground fuel line leading to the elevated Generator Enclosure. The red box contains a fire extinguisher. The Hazardous Material Building #006 is in background.

Photograph 68: Wastewater treatment plant. Railroad tracks are visible in background.

Photograph 69: Control panel and tanks for the wastewater treatment plant.

Photograph 70: Drainage swale for the wastewater treatment plant. View is looking east from the launch pad. Sugar cane fields are located beyond fence line.

Photograph 71: Tether and mooring rail in background. Wastewater treatment plant in the foreground.

Photograph 72: Closer view of Tether Building and mooring rail.

Photograph 73: Additional photo of the Tether Building.

Photograph 74: Concrete staining immediately under the Tether Mooring Building pillar. Note: red at top of photo is finger in front of the lens, not staining.

Photograph 75. Additional photo of concrete staining immediately underneath the Tether Building pillar.

Photograph 76: Launch pad and mooring rail.

Photograph 77: Ramp for going over the mooring rail.

Photograph 78:  Old mop located in the Tether Building.

Photograph 79: Interior of the Tether Building. Fluid loss was observed on the floor underneath the motor.


Photograph 80: Interior electrical equipment in the Tether Building.


Photograph 81: Mechanical, hydraulic, and tether cable equipment in the Tether Building.


Photograph 82: Batteries located in the Tether Building.

Photograph 83:  Site Transformer.  Southeast section of site.


Photograph 84: Closer view of same transformer on southeast section of site.

Photograph 85: View of school located to the west of the TARS Site.

Photograph 86: Panoramic view to the west of the site

Photograph 87: View to the south.  Agricultural sugar cane fields.

Photograph 88: Weather radar tower located on the south side of the TARS Site.

Photograph 89: Agricultural equipment located south of the TARS Site.

Photograph 90: Additional agricultural equipment parked immediately adjacent to the south of the TARS Site.

# Appendix C
# Hazardous Materials Inventory

**Hazardous Materials Inventory**
**Date of Inventory: February 18, 2009**

| MSDS Number | Product | Manufacture | Location | Quantity |
|---|---|---|---|---|
| 351 | Sulfur Hexafluoride $SF_6$ gas | Allied Corp | Payload | 2 large canisters / 5 small canisters |
| 387 | Nitrogen gas | Air Products and Chemicals | Payload | 2 large canisters |
| 096 | Oxygen gas | Mada Chemical Products Inc. | Payload | 2 large canisters |
| 388 | Acytelene dissolved | Air Products and Chemicals | Payload | 2 large canisters |
| 176 | Texaco Marfak multi purpose | Texaco | Haz Mat Storage | 5 gallon |
| 385 | Methyl ethyl ketone SATWipes | Contec, Inc. | Haz Mat Storage | 6 containers, unknown if still has contents. |
| 242 | Fuel cans. Gasoline | Unknown | Haz Mat Storage | 4 count, 5 gallon cans; 1 count 2.5 gallon can. Empty or nearly so. |
| 174 | DTE oil light | Mobil | Haz Mat Storage | 5 gallon empty or nearly so. |
| 454 | Aero HFA hydraulic fluid | Aero | Haz Mat Storage | 5 gallon (full) |
| 381 | Joint Sealant | Unknown | Haz Mat Storage | 36 tubes |
| 251 | Vactra Oil No. 4 | Mobil Oil Corp. | Haz Mat Storage | 5 gallon (full) |
| 378 | Enviro-Wash | American Bio-Technologies | Maintenance | 1 gallon nearly empty |
| 232 | Methyl ethyl ketone | unknown | Maintenance | 4 nearly empty bottles (liter) |
| 363 | Non-detergent oil SAE 30 | Chevron | Maintenance | 1 liter bottle |
| 359 | MSA Cleaner / Disinfectant | Lonza | Operations Bldg kitchen | 1 gallon |

# Appendix D
# Lead-Based Paint Report from Another Project

ERDC/CERL TR-07-2

Construction Engineering
Research Laboratory

US Army Corps
of Engineers®
Engineer Research and
Development Center

# LBP Concerns in Producing Recycled Concrete Aggregate from Former Fort Ord Family Housing

Stephen D. Cosper

January 2007

ERDC/CERL TR-07-2
January 2007

# LBP Concerns in Producing Recycled Concrete Aggregate from Former Fort Ord Family Housing

Stephen D. Cosper

*Construction Engineering Research Laboratory*
*U.S. Army Engineer Research and Development Center*
*PO Box 9005*
*Champaign, IL 61826-9005*

Final report

Approved for public release; distribution is unlimited.

Prepared for U.S. Army Corps of Engineers
Washington, DC 20314-1000

**Abstract:** The presence of lead-based paint on concrete from demolition projects raises questions regarding suitable reuse or disposal. The regulatory environment is unclear on issues of reuse. This report attempts to correlate the concentration of lead on a painted building to the concentration of lead in aggregate produced from that building's demolition. This final concentration is the key metric in determining suitable end use. In this case of former Army family housing, the final lead concentration was found to be quite low.

(Cover photograph: Discharge conveyor from Kroeker concrete crushing plant, with Confidential Compliance Consultants sampling technician in foreground.)

# Contents

# Figures and Tables

## Figures



## Tables

# Preface

This study was conducted under the applied research program (6.2) in the solid waste program. A portion of this study was funded by the Construction Materials Recycling Association and the National Demolition Association. The technical monitor was Malcolm McLeod, Headquarters, U.S. Army Corps of Engineers.

The work was performed by the Environmental Processes Branch (CN-E) of the Installations Division (CN), Construction Engineering Research Laboratory (CERL). The CERL Principal Investigator was Stephen D. Cosper. Dr. Stephen W. Maloney is Acting Chief, CN-E, and Dr. John T. Bandy is Chief, CN. The Technical Director for the Environmental Quality/Installations business area is Martin J. Savoie. The Deputy Director of CERL is Dr. Kirankumar V. Topudurti, and the Director is Dr. Ilker Adiguzel.

The author would like to acknowledge the following for their contributions to the project and the contents of this report: Stan Cook, Fort Ord Reuse Authority; Kathleen Herzog, University of Illinois, Urbana-Champaign; Jeff Kroeker, Kroeker, Inc.; Alexis Rivera-Montalvo, University of Puerto Rico–Mayagüez; Mike Taylor, National Demolition Association; George Thomas, Confidential Compliance Consultants; and William Turley, Construction Materials Recycling Association.

CERL is an element of the U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Commander and Executive Director of ERDC is COL Richard B. Jenkins, and the Director of ERDC is Dr. James R. Houston.

# Unit Conversion Factors

| Multiply | By | To Obtain |
|---|---|---|
| feet | 0.3048 | meters |
| mils | 0.0254 | millimeters |
| square feet | 0.09290304 | square meters |

# 1 Introduction

## Background

Environmental lead (Pb) comes from many sources and takes many pathways to human exposure. Pb has a myriad industrial uses, many of which have been curtailed due to human health and environmental risk. A lingering Pb-related concern is Pb from lead carbonate (PbCO3) paints used in wood and concrete buildings throughout most of the 20th century. When these buildings are still occupied, Pb exposure from the lead-based paints (LBP) is of particular concern as Pb interferes with neurological development. An entire regulatory regime, testing criteria, and abatement techniques have been developed to address the dangers of LBP in occupied housing.

When the building is no longer occupied and is ready for demolition, however, the presence of LBP becomes a question of worker safety and environmental protection. Occupational Safety and Health Administration (OSHA) regulations deal with worker protection; provisions in the Resource Conservation and Recovery Act (RCRA) deal with the disposal of Pb-containing wastes.

What if the project manager does not want to "dispose of" the Pb-containing demolition wastes? How to handle such waste has been a regulatory gray area for many years. CERL researchers have attempted to quantify Pb mass and concentrations from several demolition projects to help determine relative hazard, and to try to assess which environmental laws are applicable. Recycling and reuse of materials with LBP is of special interest because they are so pervasive in older Army building stock, much of which the Army is replacing.

## Objective

The purpose of this study was to track the location and concentration of LBP through the demolition of a set of typical concrete Army buildings; and the subsequent crushing of the concrete for reuse. The project took place at Fort Ord, CA, which was closed under Base Realignment and Closure (BRAC) in 1991.

## Paint Chemistry

Paint pigments are solid, uniform particles that are permanently insoluble in the paint (Gooch 1993). The main purposes of a pigment are to give color and opacity to the paint. White pigments are specially important because they provide the opacity (ability to hide what is under the paint), and a basis for other colors. PbCO3 was a very common white pigment in the mid-20th century. Its use was phased out as health and environmental problems became evident, and as other pigments were developed. Today, titanium dioxide is very prevalent.

Another potential source of Pb in paint are organic Pb compounds used as “driers” in paint. Driers are chemical paint additives that hasten drying. They pull oxygen through the wet paint film to oxidize and cure the paint. These driers include lead naphthenate, lead resinates, and lead linoleates (Gooch 1993). One of CERL’s research partners is currently attempting to speciate Pb contamination found inside wood from a WWII-era Army building.

## Regulation

Multiple federal agencies regulate Pb depending on the exact location and circumstance.

The U.S. Consumer Product Safety Commission (<http://www.cpsc.gov>) has banned the sale of LBP to consumers. The agency now limits the Pb concentration to 0.06 percent (600 ppm) in paints or painted items if they will be sold to the general public.

The U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency (USEPA) jointly control household Pb exposure. The limit for Pb in soil is 400 ppm for bare surface soil in residential areas where child contact is likely. This limit increases to 1,200 ppm for areas with minimal potential for child contact.

Pb dust is a primary route of exposure in housing. The dust is generated from paint deterioration, renovations, or friction surfaces such as door jambs. The hazard limits for Pb in dust is 40 $\mu g/ft^2$ for floors, 250 $\mu g/ft^2$ for window sills, and 400 $\mu g/ft^2$ for window troughs. These levels are also used to determine where Pb abatement has been conducted.

OSHA regulates worker exposure to Pb dust (<http://www.osha.gov/SLTC/constructionlead/index.html>). The two numeric limits are both applicable over an 8-hr workday. The action level is 30 μg/m$^3$. The "action level" means employee exposure, without regard to the use of respirators. The permissible exposure limit (PEL) is 50 μg/m$^3$. No employee should be exposed to Pb over the PEL, calculated as an 8-hr time weighted average. Different levels for monitoring and worker protection are engaged when crossing these limits.

Under RCRA, a waste is considered hazardous if it contains more than 5 ppm Pb (throughout the entire bulk of the material) per the toxicity characteristic leaching procedure (TCLP). Note that RCRA governs the disposition of a material only if it is a "waste" and will not be reused. The following USEPA web site is a good place to review Federal Pb regulations and programs: <http://www.epa.gov/lead/index.html>.

Because this project took place in California, environmental regulations for that state are also of interest. A material is considered a California hazardous waste if the total Pb content is above 1,000 ppm.

## Project description

Local governments have been redeveloping the former Fort Ord property for a variety of purposes, including "affordable" housing in a region with very high housing costs. One hundred acres of family housing were cleared in 2003. See the website of the Fort Ord Reuse Authority (FORA): <http://www.fora.org>.

As part of the reuse and redevelopment of the Fort Ord property, Kauffman & Broad Homes is building new homes on the site of the Hayes Park family housing area. Kauffman retained Kroeker, Inc. of Fresno, CA (<http://www.kroekerinc.com/>) to demolish 367 family housing units. The contract detailed specific requirements for dismantling all reusable or recyclable construction materials prior to structural demolition. Part of this pre-demolition work included the abatement of asbestos and LBP. Both of these materials are considered California Hazardous Wastes and must be disposed under strict regulatory controls, including full manifesting. These single and duplex homes were concrete block structures with stucco finish on slab foundations. After demolition, Kroeker was to crush the resultant concrete rubble (an estimated 70,000 tons) to be used later as fill, road base, etc., for other redevelopment work.

Kroeker used an Eagle Crusher, Model CV 1400; an Eagle triple deck screen, Model 65D006; and associated conveyors. Go to the Eagle website http://www.eaglecruser.com/?articleid=73 for an article with more specifics. Figure 1 shows the crusher plant in operation.

The goal of this study was to try to identify and quantify the disposition of LBP from the buildings through the entire process of demolition and crushing with the following steps:

- Measure Pb content on three study buildings at Hayes Park
- Monitor air emissions during demolition
- Monitor air emissions during crushing
- Sample soil near buildings and at crusher site
- Measure Pb concentration of crushed concrete product
- Compare predicted Pb concentration (based on building samples) to Pb concentration observed in crushed concrete product
- Draw conclusions on fate of LBP.

Figure 1. Overview of crusher plant.

## Approach

The U.S. Army Engineer Research and Development Center's Construction Engineering Research Laboratory (CERL), in cooperation with the Construction Materials Recycling Association (CMRA, Eola, IL, <http://www.cdrecycling.org>) and the National Demolition Association (NDA, Doylestown, PA, <http://www.demolitionassociation.com/>) retained Confidential Compliance Consultants (CCC, Altadena, CA,

<http://www.confidentialcompliance.com/>) to assist with the sampling work. Prior to the execution of this study, all asbestos and LBP were reportedly abated. Structural demolition of the concrete structures remaining was well underway prior to sampling. Most of the interior walls were concrete and covered with a paint containing both Pb and asbestos. This paint was abated prior to demolition. The abatement activity was driven by the asbestos content.

Three sample structures were chosen to study their LBP content. They were some of the last units to be demolished under the redevelopment project, and had already been stripped down to concrete walls. Two of these were duplex family housing units. The addresses were 223, 225-227, and 226-228 Napier Street. Figure 2 shows a map of the Hayes Park neighborhood. The numbers on the map are the Army real property building numbers. This report uses the common street addresses. Figure 3 shows a typical building in this neighborhood.


Figure 2. Hayes Park Army family housing.


Figure 3. Typical family housing unit.

# 2 Sampling Results

## Interior wipe samples

Three of the Hayes Park buildings were selected as research structures. They were out of the way of the active demolition work, and they were among the last to be removed.

CCC took floor wipes at the three buildings. Table 1 shows the results. The results shown were the analytical results of composite wipe samples, where each structure had four single wipe samples submitted as a single composite sample.

Table 1. Interior floor dust wipe samples.

| Building Number | Pb conc. (µg/ft$^2$) |
|---|---|
| 223 | 1,957 |
| 225/227 | 356 |
| 226 | 179 |

Although these structures were not intended to be cleaned for Pb abatement clearance, one can compare the numbers in Table 1 to the HUD limit of 40 µg/ft$^2$ for interior floors. The presence of Pb in dust on the floor is not surprising considering the LBP found in the existing paint films within these structures. The most significant concern from this dust would be worker exposure. Prior to mechanical demolition of the buildings, workers stripped out doors, fixtures, wood partitions, etc., until only the concrete walls remained.

## Crusher site wipe samples

The crusher site consisted of a large fenced staging area with an entrance for trucks, bringing concrete from the demolition site. A second gate allowed the trucks to exit without the need for backing into traffic.

An area was designated as the supply dump site. Here, after trucks dumped their loads, a front-end loader or a track-mounted excavator would load the rubble into the crusher's receiving hopper. A water tanker onsite supplied a much needed stream of dust control spray. The concrete rubble was crushed, screened, and stacked in large piles. Table 2 lists re-

sults of Pb wipe samples at the crusher site. Figure 4 shows a CCC staff member taking a wipe sample from a truck at the crusher site.

Table 2. Wipe samples at the crusher site.

| Location | Pb conc. ($\mu g/ft^2$) |
|---|---|
| Crusher - left front | 43 |
| Crusher - left rear | <20 |
| Crusher - right front | 388 |
| Crusher - right rear | 64 |
| Excavator – bucket | 71 |
| Excavator - left front | <20 |
| Excavator - left rear | <20 |
| Excavator - right front | 23 |
| Excavator - right rear | <20 |
| Loader – bucket | <20 |
| Loader - Left front tire | 105 |
| Loader - right side | 81 |
| Truck - left front | 67 |
| Truck - left rear | <20 |
| Truck - right front | 293 |
| Truck - right rear | <20 |
| Worker – gloves | 46 |
| Worker - hard hat | <20 |
| Worker - left boot | <20 |
| Worker - right boot | 33 |


Figure 4. Dust wipe sampling.

The results show that the Pb dust levels are not altogether risky for workers in the immediate area. The amount of airborne dust is generally likely to pose a greater hazard than the small Pb content of the dust. A dust control spray system was used and worked well.

## Soil samples

CCC took soil samples at the housing area, around the study buildings, and at the crusher site. Researchers wanted a better idea of Pb background information, even if not directly applicable to the estimate of Pb loadings transferred from the buildings to crushed concrete products.

Table 3 lists results of soil samples taken along the drip line of the study buildings. Four samples were taken from each building and combined into one composite from each building.

Table 3. Lead concentration in soil samples taken near buildings.

| Building Number | Pb conc. (ppm) |
|---|---|
| 223 | 60 |
| 225 / 227 | 30 |
| 226 | 30 |

Table 4 lists samples taken at the crusher site. The material taken was a mixture of soil and crushed concrete residue.

Table 4. Lead concentration in soil samples taken at crusher site.

| Location | Pb conc. (ppm) |
|---|---|
| Near the crusher | 30 |
| Intermediate distance from the crusher | 40 |
| Distant from the crusher | 30 |

Both Table 3 and Table 4 show some low level of Pb at these locations, but the values are much lower than the residential soil limit of 400 ppm.

## Air samples

The collection of air samples was conducted over a period of several days, near various workers, conducting varied tasks. The PEL for Pb for construction workers is 50 $\mu g/m^3$. It is normally not anticipated that outdoor construction operations would generate these levels. The action level is 30

$\mu g/m^3$, which is also uncommon for outdoor construction. California regulations require that a "risk exposure" be conducted to determine worker exposure to Pb-laden dust during construction projects where disturbance of known LBP exists. This demolition project was preceded by an "abatement activity" whereby all identified LBP was to be removed. However, the scope and effectiveness of this activity is questionable because of the LBP found in the study buildings, as described later in this report. Figure 5 shows interior demolition work. Table 5 lists airborne Pb exposure to workers at the demolition site.


Figure 5. Interior demolition.

Table 5. Worker exposure to airborne Pb at demolition site.

| Sample Date | Location | 8-hr Time Weighted Average ($\mu g/m^3$) |
|---|---|---|
| 10/Feb/2003 | Bobcat operator | <1.67 |
| 10/Feb/2003 | Interior demolition | <1.67 |
| 10/Feb/2003 | Interior demolition | <1.67 |
| 10/Feb/2003 | Outside laborer | <1.67 |
| 11/Feb/2003 | Interior demolition | <1.67 |
| 11/Feb/2003 | Interior demolition | <1.67 |
| 11/Feb/2003 | Exterior worker | <1.67 |
| 11/Feb/2003 | Bobcat operator | <1.67 |
| 20/Feb/2003 | Excavator operator | <1.67 |
| 20/Feb/2003 | Waterman | <1.67 |

As evident from the results in Table 5, between the Contractor's use of water spray from tanker trucks for dust control (Figure 6), and the heavy, humid air of the rainy season conditions, the levels of air-borne, lead-laden dust were below normally detectable levels. These combined factors produce a very low risk of worker exposure to lead-laden dust at the demolition site.

General working conditions at a concrete crushing plant normally produce a dusty work environment. Dust control water spray systems are a necessity. Dust control was used while the following air samples were collected (Table 6), both from equipment operators and downwind from the crushing plant.

Figure 6. Dust control truck.

Table 6. Air monitoring at crusher site.

| Sample Date | Location | 8-hr Time Weighted Average (µg/m³) |
|---|---|---|
| 21/Feb/2003 | Excavator operator #1 | <1.67 |
| 21/Feb/2003 | Water hose operator #1 | <1.67 |
| 21/Feb/2003 | Excavator operator #2 | <1.67 |
| 21/Feb/2003 | Water hose operator #2 | <1.67 |
| 21/Feb/2003 | High volume air sampler downwind #1 | <1.67 |
| 21/Feb/2003 | High volume air sampler downwind #2 | <1.67 |

As can be seen in Table 6, the levels of worker and ambient exposure to air-borne lead-laden dust are nondetectable. These sample results were consistent with the worker results collected from the demolition site. Over the entire period of sample collection, not a single sample revealed a Pb level above detectable limits. Therefore, no additional air monitoring was performed.

## Paint samples

As mentioned previously, interior paints had an asbestos component, as well as Pb content. Because of the asbestos, all interior wall surfaces were scraped, and most walls were covered in a sealant material, which is a sign of abatement completion. Some paint still remained on interior walls (Figure 7), and exterior paint remained intact. CCC sampled all wall surfaces for Pb content. The purpose was to help calculate the overall Pb content of the structures. CERL also took concrete samples, as described in the next section. The results of the Pb content of the paint samples are included in Table 7.

Figure 7. Remaining coating on interior walls.

Table 7. Paint sampling data.

| House Number | Sample Location | Pb Concentration in paint (ppm) | Mass Pb per wall area ($g/ft^2$) |
|---|---|---|---|
| 223 | Living room, 4 wall composite | 2,210 | 0.0024 |
| 223 | Kitchen, 3 wall composite | 1,280 | 0.0014 |
| 223 | Bathroom, 3 wall composite | 2,290 | 0.0026 |
| 223 | Bedroom #1, 4 wall composite | 1,120 | 0.0013 |
| 223 | Bedroom #2, 2 wall composite | 1,330 | 0.0014 |
| 223 | Hall | 720 | 0.0008 |
| 223 | Exterior wall #1 | 3,060 | 0.0036 |
| 223 | Exterior wall #2 | 4,040 | 0.0046 |
| 223 | Exterior wall #3 | 8,220 | 0.0094 |
| 223 | Exterior wall #4 | 3,240 | 0.0037 |
| 223 | Exterior wall #5 | 3,200 | 0.0036 |
| 223 | Exterior, CERL sample 26 | 3,800 | * |
| 225/227 | Living room, 4 wall composite | 2,860 | 0.0034 |
| 225/227 | Kitchen, 3 wall composite | 3,090 | 0.0034 |
| 225/227 | Bathroom, 3 wall composite | 2,640 | 0.0026 |
| 225/227 | Bedroom #1, 3 wall composite | 2,120 | 0.0031 |
| 225/227 | Bedroom #2, 3 wall composite | 2,290 | 0.0025 |
| 225/227 | Hall, 2 wall composite | 2,880 | 0.0034 |
| 225 | Interior, CERL sample 29 | 5,900 | * |
| 225/227 | Exterior wall #1 | 3,040 | 0.0035 |
| 225/227 | Exterior wall #2 | 2,860 | 0.0033 |
| 225/227 | Exterior wall #3 | 3,170 | 0.0037 |
| 225/227 | Exterior wall #4 | 4,940 | 0.0056 |
| 225/227 | Exterior wall #5 | 16,550 | 0.0198 |
| 225 | Roof deck, CERL sample 28 | 3,900 | * |
| 226 | Living room, 4 wall composite | 2,350 | 0.0009 |
| 226 | Kitchen, 3 wall composite | 780 | 0.0028 |
| 226 | Bathroom, 3 wall composite | 870 | 0.0013 |
| 226 | Bedroom #1, 3 wall composite | 1,070 | 0.0010 |
| 226 | Bedroom #2, 3 wall composite | 1,050 | 0.0012 |
| 226 | Utility room | 2,900 | 0.0032 |
| 226 | Interior, CERL sample 32 | 330 | * |
| 224 | Exterior, CERL sample 30 | 5,100 | * |
| 226 | Exterior wall #1 | 3,070 | 0.0035 |
| 226 | Exterior wall #2 | 4,070 | 0.0047 |
| 226 | Exterior wall #3 | 3,670 | 0.0042 |
| 226 | Exterior wall #4 | 1,270 | 0.0015 |
| 226 | Exterior wall #5 | 11,500 | 0.0133 |
| CERL sample 16 | Low density concrete roof deck | 3,000 | * |
| CERL sample 17 | Low density concrete roof deck | 1,700 | * |

* Not measured.

Table 8 summarizes the data in Table 7 by averaging the values by building and by location.

Table 8. Paint sample data summary.

| House Number | Sample Location | Pb Concentration (ppm) | Mass Pb per wall area (g/ft$^2$) |
|---|---|---|---|
| 223 | Interior | 1,492 | 0.0017 |
| 223 | Exterior | 4,260 | 0.0050 |
| 225/227 | Interior | 3,111 | 0.0031 |
| 225/227 | Exterior | 6,112 | 0.0072 |
| 226 | Interior | 1,336 | 0.0017 |
| 226 | Exterior | 4,780 | 0.0054 |
| any | roof deck | 2,867 | 0.0033 |

Due to the presence of Pb in the paint, workers inside these type of buildings should wear appropriate respiratory protection, especially when performing dust-generating demolition tasks.

## Concrete samples

In addition to the CCC paint samples described in the previous section, CERL also took several samples for Pb analysis from the housing site and the crusher site. These samples represented the range of materials (Figure 9 for example) that would be combined at the crusher site to produce the recycled concrete aggregate (Figure 9) for use as road base and other products. CERL took 34 samples, and subjected them to various combinations of Pb analysis. Table 9 summarizes analytical results from these samples.

Figure 8. Painted concrete piece.

Figure 9. Finished recycled concrete aggregate.

Table 9. Summary of CERL concrete samples.

| Material | Total Pb (ppm) | Density (lb/ft$^3$) |
|---|---|---|
| Crushed concrete product, old | 17.0 | 62.89 |
| Crushed concrete product, recent | 16.7 | 55.37 |
| Asphalt concrete, from street | 1.5 | |
| Asphalt concrete, from driveway | 17.0 | |
| Floor slab | 2.4 | 142.80 |
| Light concrete, painted, before crushing | 305.0 | 90.38 |
| Exterior wall | 248.1 | |
| Interior wall | 250.7 | |
| Roof deck | 560.0 | |
| Concrete pavement | <1.0 | 148.77 |
| Fines from under conveyor | 110.7 | 58.68 |

Concrete density was determined using American Society for Testing and Materials (ASTM) method C642-9 (ASTM 1997). In addition to the analyses listed here, at least one sample from each material type was subjected to the TCLP test for Pb. In every case, the result was less than 0.010 ppm.

SI Consulting (Mill Valley, CA) took 50 core samples from 25 of the Hayes Park buildings (Kroeker 2002). The core samples had a range in total Pb concentration between 18 and 160 ppm, with an average of 51.

# 3 Modeling

## Approach

One goal of this study was to demonstrate a method for accurately predicting Pb concentration in recycled concrete aggregate (RCA) product based on measurements of LBP concentrations and building dimensions, before the demolition work proceeded.

The previous chapter listed the LBP and concrete sampling results. The next step is to construct models of the buildings to estimate the mass and surface of each of the building components (e.g., interior walls or pavement). The modeling is done using the "reverse quantity take-off" method, which means estimating the quantity of materials that go into a building, based on observation and measurement of a standing building.

Figures 10, 11, and 12 show line drawings of buildings 223, 224, and 225 Napier Street based on field measurements. House 224 is half of a duplex with 226; 225 is duplexed with 227. Each side is a mirror image. It is assumed that paint measurements for building 224 will be valid for 226.

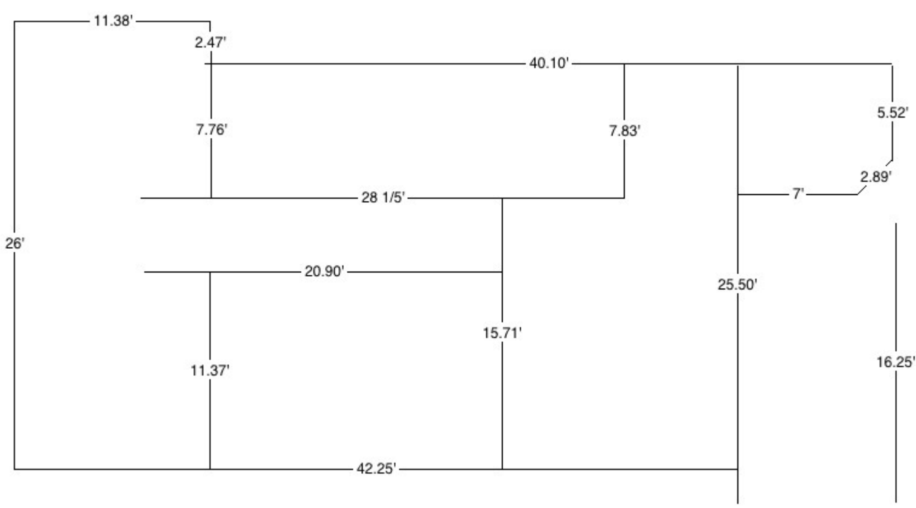



Figure 10. Line drawing of 223 Napier Street.

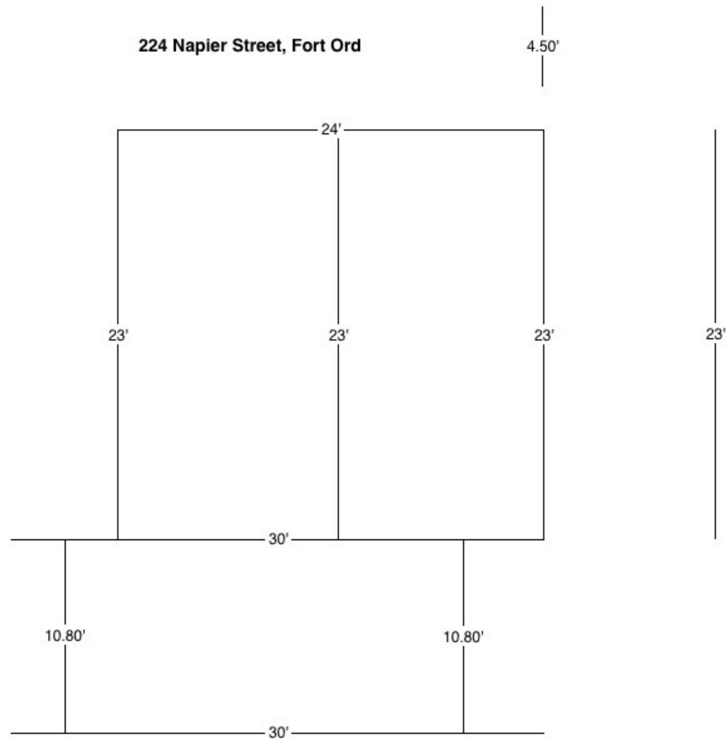



Figure 11. Line drawing of 224 Napier Street.

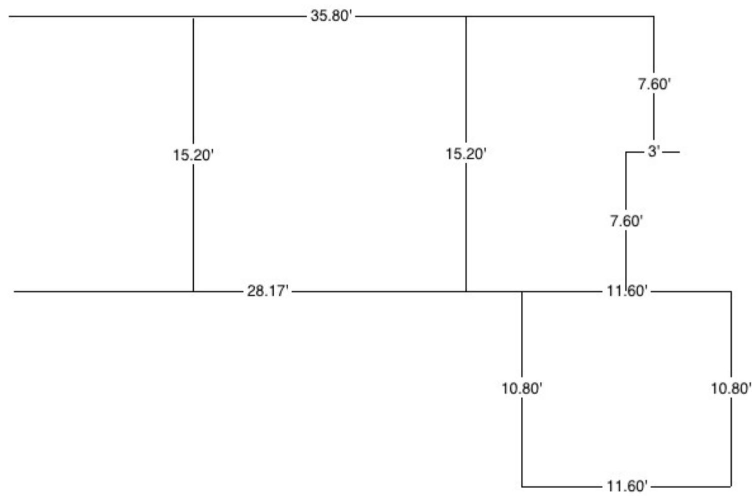



Figure 12. Line drawing of 225 Napier Street.

## Calculations

Based on Figures 10–12 and some design assumptions for residential-scale construction, CERL developed surface area models for each of the three structures, as summarized in Table 10. Mass calculations are highlighted.

Table 10. Reverse quantity take-off.

| Location | 223 | 224 | 225 |
|---|---|---|---|
| Interior wall surface area ($ft^2$) | 2,955.8 | 1,236.2 | 1,018.8 |
| Exterior wall surface area ($ft^2$) | 1,499.7 | 1,577.6 | 734.0 |
| Wall volume ($ft^3$) | 855.3 | 667.8 | 377.0 |
| Wall concrete density (pounds/$ft^3$) | 90.0 | 90.0 | 90.0 |
| Wall mass (g) | 34.9E+6 | 27.3E+6 | 15.4E+6 |
| Roof deck exterior area ($ft^2$) | 1,497.2 | 1,366.0 | 783.7 |
| Ceiling area ($ft^2$) | 1,090.0 | 876.0 | 646.6 |
| Roof deck volume ($ft^3$) | 748.6 | 683.0 | 391.9 |
| Roof deck density (pound/$ft^3$) | 45.0 | 45.0 | 45.0 |
| Roof deck mass (g) | 15.3E+6 | 14.0E+6 | 8.0E+6 |
| Floor area ($ft^2$) | 1,090.0 | 876.0 | 646.6 |
| Floor slab volume ($ft^3$) | 471.7 | 376.8 | 298.2 |
| Floor slab mass (g) | 30.6E+6 | 24.5E+6 | 19.4E+6 |
| Concrete footers ($ft^3$) | 155.8 | 122.8 | 110.7 |
| Density floor and footer (pound/$ft^3$) | 143.0 | 143.0 | 143.0 |
| Mass footer (g) | 10.1E+6 | 8.0E+6 | 7.2E+6 |
| Carport concrete volume ($ft^3$) | 144.9 | 155.7 | 141.6 |
| Concrete apron on drive volume ($ft^3$) | 29.4 | 49.3 | 52.8 |
| Asphalt drive volume ($ft^3$) | 30.8 | 58.7 | 44.8 |
| Mass asphalt drive (g) | 1.8E+6 | 3.5E+6 | 2.6E+6 |
| Asphalt street volume associated with this building ($ft^3$) | 198.5 | 125.5 | 174.5 |
| Concrete curb volume ($ft^3$) | 36.7 | 22.8 | 18.5 |
| Concrete sidewalk volume ($ft^3$) | 102.1 | 154.5 | 98.6 |
| Density for all exterior pavement (incl. carport, apron, curb, and sidewalk) (pound/$ft^3$) | 150.0 | 150.0 | 150.0 |
| Mass exterior concrete (g) | 21.3E+6 | 26.0E+6 | 21.2E+6 |
| Density asphalt (pound/$ft^3$) | 130.0 | 130.0 | 130.0 |
| Mass of asphalt street, per building (g) | 11.7E+6 | 7.4E+6 | 10.3E+6 |
| Total mass of material to crush, per building (g) | 125.8E+6 | 110.6E+6 | 84.1E+6 |

The next step is to combine the material quantities in Table 10 with the paint sampling data to compute an expected overall Pb concentration in RCA when the entire mass of the building is crushed together. This includes walls, foundation, pavements, street, etc. These calculations are

shown in the following three tables. Tables 11, 12, and 13 calculate the overall Pb concentration per building based on the surface Pb measurements taken by CCC. These calculations are repeated, first based on solid concrete samples, and second based on paint concentrations collected by CCC, multiplied by an assumed paint thickness of 10 mils, to get a Pb loading rate. Table 14 summarizes the results of all three methods.

Table 11. Overall Pb computation for building 223.

| Item | Mass (g) | Bulk Pb conc (ppm) | Mass Pb (g) | Painted Surface area (ft²) | Pb paint (or dust) conc (g/ft²) | Mass Pb from paint (g) | Total mass Pb (g) |
|---|---|---|---|---|---|---|---|
| Interior walls | 34.9E+6 | | | 2,956 | 0.0017 | 5.0 | 5.0 |
| Exterior walls | | | | 1,500 | 0.005 | 7.5 | 7.5 |
| Ceiling | 15.3E+6 | | | 1,090 | 0.0017 | 1.9 | 1.9 |
| Floor | 30.6E+6 | 2.4 | 73 | 1,090 | 0.001957 | 2.1 | 75.6 |
| Roof deck exterior | | | | 1,497 | 0.0033 | 4.9 | 4.9 |
| Footing | 10.1E+6 | 0 | 0 | | | | 0.0 |
| Exterior concrete | 21.3E+6 | 0 | 0 | | | | 0.0 |
| Asphalt drive | 1.8E+6 | 17 | 31 | | | | 30.9 |
| Asphalt street | 11.7E+6 | 1.5 | 18 | | | | 17.6 |
| Total ppm Pb | 1.14 | | | | | | |

Table 12. Overall Pb computation for building 224.

| Item | Mass (g) | Bulk Pb conc (ppm) | Mass Pb (g) | Painted Surface area (ft²) | Pb paint (or dust) conc (g/ft²) | Mass Pb from paint (g) | Total mass Pb (g) |
|---|---|---|---|---|---|---|---|
| Interior walls | 27.3E+6 | | | 1,236 | 0.0017 | 2.1 | 2.1 |
| Exterior walls | | | | 1,578 | 0.0054 | 8.5 | 8.5 |
| Ceiling | 14.0E+6 | | | 876 | 0.0017 | 1.5 | 1.5 |
| Floor | 24.5E+6 | 2.4 | 59 | 876 | 0.000179 | 0.2 | 58.9 |
| Roof deck exterior | | | | 1,366 | 0.0033 | 4.5 | 4.5 |
| Footing | 8.0E+6 | 0 | 0 | | | | 0.0 |
| Exterior concrete | 26.0E+6 | 0 | 0 | | | | 0.0 |
| Asphalt drive | 3.5E+6 | 17 | 59 | | | | 58.9 |
| Asphalt street | 7.4E+6 | 1.5 | 11 | | | | 11.1 |
| Total ppm Pb | 1.32 | | | | | | |

Table 13. Overall Pb computation for building 225.

| Item | Mass (g) | Bulk Pb conc (ppm) | Mass Pb (g) | Painted Surface area (ft²) | Pb paint (or dust) conc (g/ft²) | Mass Pb from paint (g) | Total mass Pb (g) |
|---|---|---|---|---|---|---|---|
| Interior walls | 15.4E+6 | | | 1,019 | 0.0031 | 3.2 | 3.2 |
| Exterior walls | | | | 734 | 0.0072 | 5.3 | 5.3 |
| Ceiling | 8.0E+6 | | | 647 | 0.0031 | 2.0 | 2.0 |
| Floor | 19.4E+6 | 2.4 | 46 | 647 | 0.000356 | 0.2 | 46.7 |
| Roof deck exterior | | | | 784 | 0.0033 | 2.6 | 2.6 |
| Footing | 7.2E+6 | 0 | 0 | | | | 0.0 |
| Exterior concrete | 21.2E+6 | 0 | 0 | | | | 0.0 |
| Asphalt drive | 2.6E+6 | 17 | 45 | | | | 44.9 |
| Asphalt street | 10.3E+6 | 1.5 | 15 | | | | 15.5 |
| Total ppm Pb | 1.43 | | | | | | |

Table 14. Comparison of total Pb calculations.

| Building/sample | Pb conc (ppm) |
|---|---|
| 223 with CCC paint data | 1.14 |
| 224 with CCC paint data | 1.32 |
| 225 with CCC paint data | 1.43 |
| 223 with CERL concrete data | 138.66 |
| 224 with CERL concrete data | 133.68 |
| 225 with CERL concrete data | 100.36 |
| 223 with assumed paint thickness | 5.23 |
| 224 with assumed paint thickness | 5.33 |
| 225 with assumed paint thickness | 5.41 |

## Comparison of calculations

Of all the measurements of Pb in concrete presented in this report, the direct measurement of Pb in aggregate listed in Table 9 (e.g., about 17 ppm for RCA product) is the most accurate. However, these results are after demolition and crushing; therefore, it would be desirable to be able to predict this concentration using the estimates described above. The three types of paint data used in the previous section are:

- Pb concentration from scraping walls, grams of Pb per square foot of wall surface
- Overall Pb concentration throughout a solid surface (wall cross section), ppm Pb

- Pb concentration from other discrete paint samples, collected from walls or large painted pieces of demolition debris.

The first and third methods should be numerically similar with variation due to differences in specific starting samples. These results may slightly underestimate the actual value because all of the Pb from a surface may not be removed during the sampling activity.

The second method (concentration of solid samples) seems to overestimate the actual end value, as sampled at the crusher site. This result is probably due to difficulty in obtaining and preparing solid samples that are truly representative of, for example, the entire cross section of a wall.

# 4 Conclusions

## Comparison of modeling and sampling

To perform total Pb analysis, an environmental chemistry laboratory requires only a few grams of material. A representative sample from a concrete demolition project might be several kilograms. The problem arises when trying to prepare a representative subsample. This is a long recognized problem with determining overall Pb concentration for building debris when trying to take representative samples for TCLP for RCRA hazardous waste determination (Figure 13).

Therefore, based on this exercise, the author recommends a systematic, representative sampling plan utilizing paint samples, as opposed to solid debris samples. Of course, this applies only to painted surfaces. In the case of this study project, only solid samples can be taken from nonpainted materials such as pavements.

Figure 13. LBP covered concrete in mixed debris pile.

## General work site assessment

Based upon several weeks of worker observation, including monitoring of demolition contractor dust control procedures, worker practices, and analytical evaluation of samples collected during actual demolition and concrete recycling operations, these are the key observations:

- During the overall personnel monitoring of various worker activities, no recordable levels of Pb were identified
- Analysis of soils collected at the designated test structures showed no appreciable levels of Pb
- Levels of Pb found in the processed concrete compared favorably with the average levels identified at the test structures (i.e., no significant variations of recycled concrete Pb levels compared to soil Pb levels prior to demolition)
- Samples collected from within the abated structures revealed significant levels of LBP remaining on the wall surfaces.
- Wipe samples from the interior surfaces also showed high levels of Pb.

The following conclusions were drawn based on careful review of the sample data and photographs documenting worker practices:

The low levels (nondetectable) of worker Pb dust exposure can be largely attributed to the Contractor's attention to dust control. Additionally, the demolition activities were conducted during a time when seasonal rains and heavy, humid air prevailed. This obviously contributed to low worker exposure to airborne Pb dust.

The levels of Pb at the recycling facility were directly related to high levels of Pb found at the structures prior to demolition. However, these levels were diluted at the crushing plant as the concrete was processed and the Pb-bearing surfaces were mixed throughout the bulk of the concrete. Although dilution is not normally embraced as a solution to Pb abatement, it appears to be reasonable in this case and, therefore, likely an acceptable practice. The low levels of Pb found in the processed concrete would further be stabilized when reused as road base, as was the intent of this project. As road base, the risk of exposure to children would be very low.

## Results summary

Eight paint samples were taken from the three study buildings on Napier Street and the crusher site. The average total Pb concentration in the paint was 3,700 ppm. This number is very reasonable and expected.

Eleven samples of crushed concrete product were taken from various locations around the finished RCA pile at the crusher site. The average total Pb concentration was 17 ppm. Seventeen is a little above the expected background number. Given the source and intended application as a road base, however, the concentration is quite low and should not be an impediment to using RCA. TCLP Pb extractions were performed for two of the RCA samples with the highest total Pb concentration. In both cases, the result was less than 0.01 ppm — far below the RCRA limit of 5.

Three samples of fines from under the crusher were taken one evening as the crew was cleaning up. The average total Pb concentration was 111 ppm. It appears that this type of location is a major sink for LBP particles (Figure 14). Through the crushing process, loose paint flakes off and enters the fines waste stream. The Pb concentration in the fines is below the USEPA limit for Pb-in-soil for residential application. Because the fines are respirable as workers move around and clean up, appropriate personal protective equipment is recommended. CERL performed TCLP for Pb on the two samples with the highest total Pb (160 and 130 ppm). As with the crushed RCA product, the result was less than 0.01 ppm. The Pb in the fines would


Figure 14. Fines sample location.

be expected to be more "leachable" because more surface area is exposed to interaction with the acid test solution. However, much more concrete surface area is also exposed, which will neutralize the extracting solution.

# References


American Society for Testing and Materials (ASTM). 1997. Standard Method for Density, Absorption, and Voids in Hardened Concrete. C 642-97. West Conshohocken, PA: ASTM.

Confidential Compliance Consultants (CCC). 2003. Lead-Based Paint in Concrete Monitoring Project, Conducted at the Former Ft. Ord Hayes Park Housing Area, Ord Military Community, Monterey, CA. Report to CERL and CMRA. Altadena, CA: CMRA.

International City/County Management Association (ICMA). 2004. ICMA Special Report: The Impact of Unique Contaminants on BRAC Redevelopment. Washington, DC: ICMA.

Gooch, Jan W. 1993. *Lead-Based Paint Handbook*. New York, NY: Plenum Press.

Kroeker, Inc. Engineering. 2002. Evaluation 11401. Fresno, CA.

SI Consulting. 2002. Lead-Containing Paint/Concrete Investigation. SI Project Number 22157.400. Hayes Redevelopment Project, Fort Ord, Seaside, CA.

# REPORT DOCUMENTATION PAGE

*Form Approved*
*OMB No. 0704-0188*



**1. REPORT DATE (DD-MM-YYYY)**
1-2002

**2. REPORT TYPE**
Final

**3. DATES COVERED (From - To)**

**4. TITLE AND SUBTITLE**
LBP Concerns in Producing Recycled Concrete Aggregate from Former Fort Ord Family Housing

**5a. CONTRACT NUMBER**

**5b. GRANT NUMBER**

**5c. PROGRAM ELEMENT NUMBER**

**6. AUTHOR(S)**
Stephen D. Cosper

**5d. PROJECT NUMBER**

**5e. TASK NUMBER**

**5f. WORK UNIT NUMBER**

**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)**
U.S. Army Engineer Research and Development Center (ERDC)
Construction Engineering Research Laboratory (CERL)
PO Box 9005
Champaign, IL 61826-9005

**8. PERFORMING ORGANIZATION REPORT NUMBER**
ERDC/CERL TR-07-2

**9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)**
U.S. Army Corps of Engineers
441 G Street NW
Washington, DC 20314-1000

**10. SPONSOR/MONITOR'S ACRONYM(S)**

**11. SPONSOR/MONITOR'S REPORT NUMBER(S)**

**12. DISTRIBUTION / AVAILABILITY STATEMENT**
Approved for public release; distribution is unlimited.

**13. SUPPLEMENTARY NOTES**
Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

**14. ABSTRACT**

The presence of lead-based paint on concrete from demolition projects raises questions regarding suitable reuse or disposal. The regulatory environment is unclear on issues of reuse. This report attempts to correlate the concentration of lead on a painted building to the concentration of lead in aggregate produced from that building's demolition. This final concentration is the key metric in determining suitable end use. In this case of former Army family housing, the final lead concentration was found to be quite low.

**15. SUBJECT TERMS**
lead-based paint, concrete, recycling, aggregate, Ft. Ord, CA, family housing

| 16. SECURITY CLASSIFICATION OF: a. REPORT | b. ABSTRACT | c. THIS PAGE | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON / 19b. TELEPHONE NUMBER (include area code) |
|---|---|---|---|---|---|
| Unclassified | Unclassified | Unclassified | SAR | 34 | |

NSN 7540-01-280-5500

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. 29.18

# Appendix E
# Environmental Data Resources Report

**Morgan City TARS site**
4535 HWY 83
Glencoe, LA 70538

Inquiry Number: 2403077.2s
January 20, 2009

# The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

# TABLE OF CONTENTS



***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

**TARGET PROPERTY INFORMATION**

**ADDRESS**

4535 HWY 83
GLENCOE, LA 70538

**COORDINATES**

| | |
|---|---|
| Latitude (North): | 29.810100 - 29˚ 48' 36.4'' |
| Longitude (West): | 91.663100 - 91˚ 39' 47.2'' |
| Universal Tranverse Mercator: | Zone 15 |
| UTM X (Meters): | 629194.2 |
| UTM Y (Meters): | 3298313.2 |
| Elevation: | 7 ft. above sea level |

**USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY**

| | |
|---|---|
| Target Property Map: | 29091-G6 KEMPER, LA |
| Most Recent Revision: | 1994 |

**AERIAL PHOTOGRAPHY IN THIS REPORT**

| | |
|---|---|
| Portions of Photo from: | 2006, 2005, 2007 |

**TARGET PROPERTY SEARCH RESULTS**

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

| Site | Database(s) | EPA ID |
|---|---|---|
| USAF AEROSTAT SITE<br>4535 HWY 83<br>FRANKLIN, LA 70538 | FINDS<br>RCRA-CESQG | LAR000049536 |
| USAF TETHERED AEROSTAT RADAR SYST<br>4535 HWY 83<br>GLENCOE, LA 70538 | NPDES | N/A |

**DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL - National Priority List
Proposed NPL - Proposed National Priority List Sites
NPL LIENS - Federal Superfund Liens

***Federal Delisted NPL site list***

Delisted NPL - National Priority List Deletions

***Federal CERCLIS list***

CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System

***Federal CERCLIS NFRAP site List***

CERC-NFRAP - CERCLIS No Further Remedial Action Planned

***Federal RCRA CORRACTS facilities list***

CORRACTS - Corrective Action Report

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF - RCRA - Transporters, Storage and Disposal

***Federal RCRA generators list***

RCRA-LQG - RCRA - Large Quantity Generators
RCRA-SQG - RCRA - Small Quantity Generators

***Federal institutional controls / engineering controls registries***

US ENG CONTROLS - Engineering Controls Sites List
US INST CONTROL - Sites with Institutional Controls

***Federal ERNS list***

ERNS - Emergency Response Notification System

***State- and tribal - equivalent CERCLIS***

SHWS - Potential and Confirmed Sites List

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF - Landfill List

# EXECUTIVE SUMMARY

DEBRIS - LDEQ Approved Debris Sites

***State and tribal leaking storage tank lists***

LUST - Leaking Underground Storage Tanks
HIST LUST - Underground Storage Tank Case History Incidents
INDIAN LUST - Leaking Underground Storage Tanks on Indian Land

***State and tribal registered storage tank lists***

UST - Louisiana Underground Storage Tank Database
INDIAN UST - Underground Storage Tanks on Indian Land

***State and tribal institutional control / engineering control registries***

AUL - Conveyance Notice Listing

***State and tribal voluntary cleanup sites***

INDIAN VCP - Voluntary Cleanup Priority Listing
VCP - Voluntary Remediation Program Sites

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS - A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

ODI - Open Dump Inventory
DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
SWRCY - Recycling Directory
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands

***Local Lists of Hazardous waste / Contaminated Sites***

US CDL - Clandestine Drug Labs

***Local Land Records***

LIENS 2 - CERCLA Lien Information
LUCIS - Land Use Control Information System
LIENS - Environmental Liens

***Records of Emergency Release Reports***

HMIRS - Hazardous Materials Information Reporting System
SPILLS - Emergency Response Section Incidents

***Other Ascertainable Records***

RCRA-NonGen - RCRA - Non Generators
DOT OPS - Incident and Accident Data

# EXECUTIVE SUMMARY

| | |
|---|---|
| DOD | Department of Defense Sites |
| FUDS | Formerly Used Defense Sites |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| ROD | Records Of Decision |
| UMTRA | Uranium Mill Tailings Sites |
| MINES | Mines Master Index File |
| TRIS | Toxic Chemical Release Inventory System |
| TSCA | Toxic Substances Control Act |
| FTTS | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| HIST FTTS | FIFRA/TSCA Tracking System Administrative Case Listing |
| SSTS | Section 7 Tracking Systems |
| ICIS | Integrated Compliance Information System |
| PADS | PCB Activity Database System |
| MLTS | Material Licensing Tracking System |
| RADINFO | Radiation Information Database |
| RAATS | RCRA Administrative Action Tracking System |
| DRYCLEANERS | Drycleaner Facility Listing |
| INDIAN RESERV | Indian Reservations |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| PWS | Public Water System Data |

**EDR PROPRIETARY RECORDS**

***EDR Proprietary Records***

| | |
|---|---|
| Manufactured Gas Plants | EDR Proprietary Manufactured Gas Plants |

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were not identified.

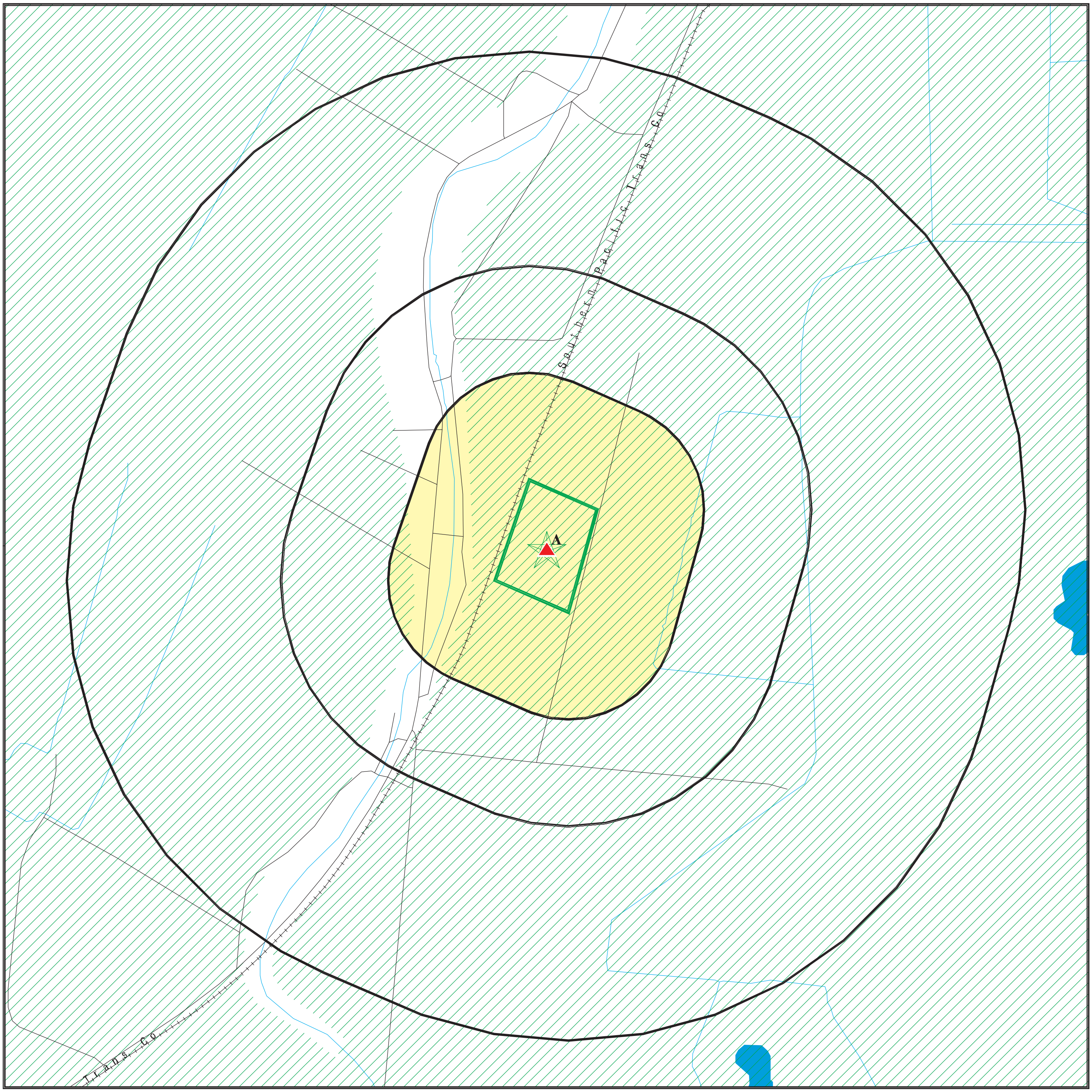
Unmappable (orphan) sites are not considered in the foregoing analysis.

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

| Site Name | Database(s) |
|---|---|
| NORTHWEST CORP | FINDS, UST, NPDES |
| GARDEN CITY PRODUCTION FACILITY | FINDS, NPDES |
| IVANHOE CARBON BLACK PLANT | SHWS, TRIS, CERC-NFRAP, RCRA-CESQG |
| BAYOU SALE PRODUCTION FACILITY | SHWS |
| TECHE SUGAR MILL | CERCLIS, FINDS, RCRA-LQG |
| TERRY’S SUPPLY | UST, HIST LUST |
| HANSON MAINTENANCE BARN | UST, HIST LUST |
| MCLEAN’S GROCERY | LUST, UST |
| CLAUSEN’S GENERAL MERCHANDISE | LUST, UST |
| CENTERVILLE SHELL | UST |
| D&T | UST |
| COLUMBIA MOBIL | UST |
| GLENCOE CHARTER SCHOOL | UST |
| KAY TERRY | UST |
| TECHE SUGAR MILL | UST |
| RAMSHUR’S GROCERY | UST |
| VERDUNVILLE EXXON | UST |
| TRUNKLINE GAS CO - M & R 80256 | RCRA-LQG |
| CHARENTON TERMINAL | RCRA-LQG |
| A & W ENGINE SVC | FINDS, RCRA-CESQG |
| GARDEN CITY PRODUCTION | FINDS |

# OVERVIEW MAP - 2403077.2s




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Oil & Gas pipelines

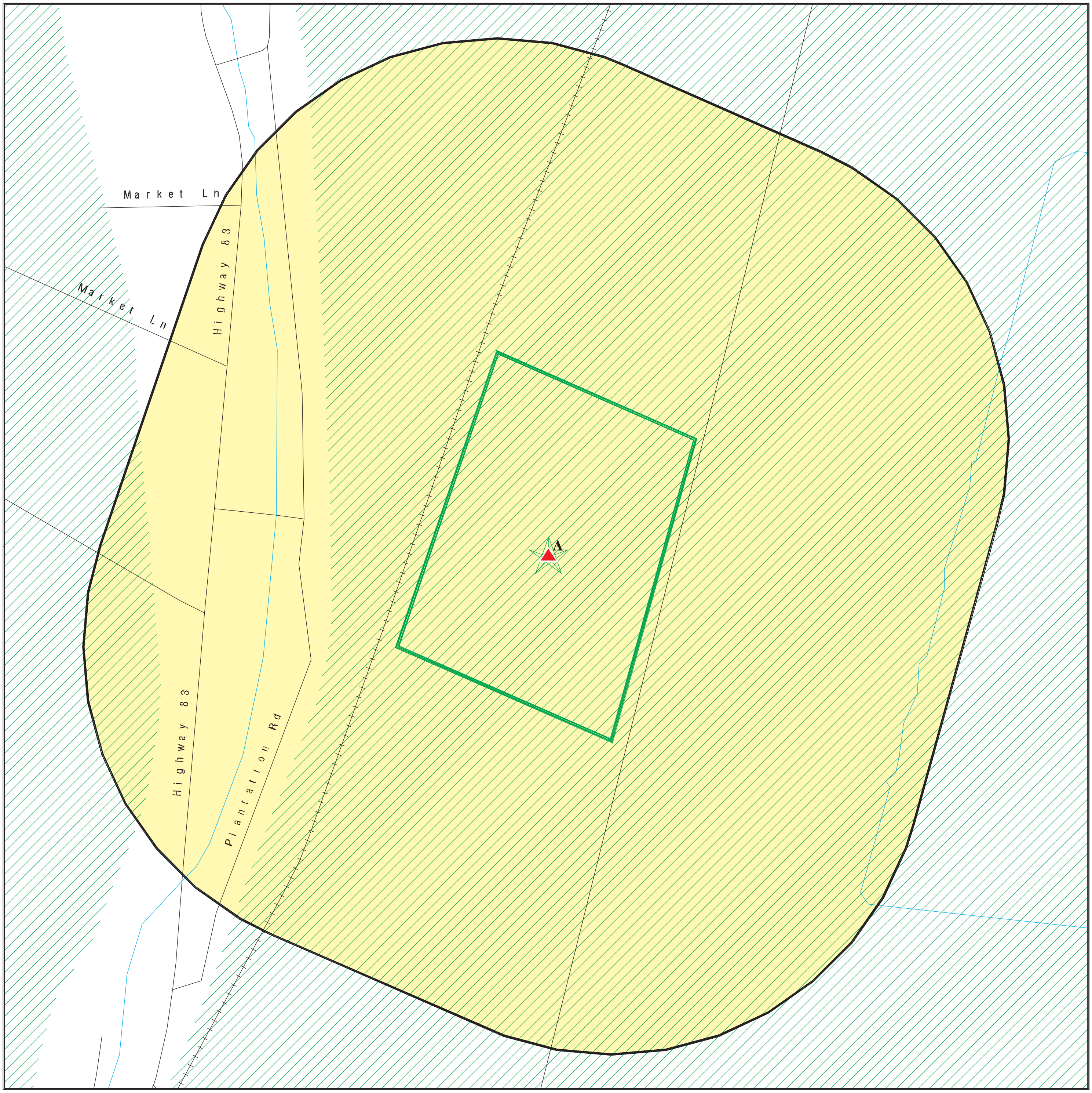
100-year flood zone

500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Morgan City TARS site | CLIENT: Environmental Express Serv,EES |
| ADDRESS: 4535 HWY 83 | CONTACT: Donna Taylor |
| Glencoe LA 70538 | INQUIRY #: 2403077.2s |
| LAT/LONG: 29.8101 / 91.6631 | DATE: January 20, 2009 5:12 pm |

# DETAIL MAP - 2403077.2s




0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Morgan City TARS site | CLIENT: | Environmental Express Serv,EES |
| ADDRESS: | 4535 HWY 83<br>Glencoe LA 70538 | CONTACT: | Donna Taylor |
| | | INQUIRY #: | 2403077.2s |
| LAT/LONG: | 29.8101 / 91.6631 | DATE: | January 20, 2009 5:13 pm |

# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Federal NPL site list*** | | | | | | | | |
| NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Federal Delisted NPL site list*** | | | | | | | | |
| Delisted NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal CERCLIS list*** | | | | | | | | |
| CERCLIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal CERCLIS NFRAP site List*** | | | | | | | | |
| CERC-NFRAP | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA CORRACTS facilities list*** | | | | | | | | |
| CORRACTS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA non-CORRACTS TSD facilities list*** | | | | | | | | |
| RCRA-TSDF | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA generators list*** | | | | | | | | |
| RCRA-LQG | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| RCRA-CESQG | X | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| US ENG CONTROLS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | | TP | NR | NR | NR | NR | NR | 0 |
| ***State- and tribal - equivalent CERCLIS*** | | | | | | | | |
| SHWS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***State and tribal landfill and/or solid waste disposal site lists*** | | | | | | | | |
| SWF/LF | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal leaking storage tank lists*** | | | | | | | | |
| LUST | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| HIST LUST | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN LUST | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal registered storage tank lists*** | | | | | | | | |
| UST | | 0.250 | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| INDIAN UST | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| AUL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal voluntary cleanup sites*** | | | | | | | | |
| INDIAN VCP | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| VCP | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| ODI | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| SWRCY | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US CDL | | TP | NR | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS 2 | | TP | NR | NR | NR | NR | NR | 0 |
| LUCIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| LIENS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | | TP | NR | NR | NR | NR | NR | 0 |
| SPILLS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA-NonGen | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| DOT OPS | | TP | NR | NR | NR | NR | NR | 0 |
| DOD | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| FUDS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| CONSENT | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ROD | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| MINES | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| TRIS | | TP | NR | NR | NR | NR | NR | 0 |
| TSCA | | TP | NR | NR | NR | NR | NR | 0 |
| FTTS | | TP | NR | NR | NR | NR | NR | 0 |
| HIST FTTS | | TP | NR | NR | NR | NR | NR | 0 |
| SSTS | | TP | NR | NR | NR | NR | NR | 0 |
| ICIS | | TP | NR | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| PADS | | TP | NR | NR | NR | NR | NR | 0 |
| MLTS | | TP | NR | NR | NR | NR | NR | 0 |
| RADINFO | | TP | NR | NR | NR | NR | NR | 0 |
| FINDS | X | TP | NR | NR | NR | NR | NR | 0 |
| RAATS | | TP | NR | NR | NR | NR | NR | 0 |
| DRYCLEANERS | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| NPDES | X | TP | NR | NR | NR | NR | NR | 0 |
| INDIAN RESERV | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| PWS | | TP | NR | NR | NR | NR | NR | 0 |
| **EDR PROPRIETARY RECORDS** | | | | | | | | |
| ***EDR Proprietary Records*** | | | | | | | | |
| Manufactured Gas Plants | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

| Map ID Direction Distance Elevation | Site | Database(s) | EDR ID Number EPA ID Number |
|---|---|---|---|
| **A1 Target Property** | **USAF AEROSTAT SITE 4535 HWY 83 FRANKLIN, LA 70538** | **FINDS RCRA-CESQG** | **1005905250 LAR000049536** |

**Site 1 of 2 in cluster A**

**Actual: 7 ft.**

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-CESQG:

| | |
|---|---|
| Date form received by agency: | 08/14/2002 |
| Facility name: | USAF AEROSTAT SITE |
| Facility address: | 4535 HWY 83<br>FRANKLIN, LA 70538 |
| EPA ID: | LAR000049536 |
| Mailing address: | PO BOX 11706<br>NEW IBERIA, LA 70562 |
| Contact: | CINDY SANDERS |
| Contact address: | PO BOX 11706<br>NEW IBERIA, LA 70562 |
| Contact country: | US |
| Contact telephone: | (337) 923-7037 |
| Contact email: | Not reported |
| EPA Region: | 06 |
| Classification: | Conditionally Exempt Small Quantity Generator |
| Description: | Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | US AIR FORCE |
| Owner/operator address: | 11817 CANON BLVD STE 306<br>NEWPORT NEWS, VA 23606 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | (757) 764-9174 |
| Legal status: | Federal |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/01/0001 |
| Owner/Op end date: | Not reported |

**USAF AEROSTAT SITE (Continued)** **1005905250**

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | Unknown |
| Mixed waste (haz. and radioactive): | Unknown |
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | Unknown |
| Furnace exemption: | Unknown |
| Used oil fuel burner: | No |
| Used oil processor: | No |
| User oil refiner: | No |
| Used oil fuel marketer to burner: | No |
| Used oil Specification marketer: | No |
| Used oil transfer facility: | No |
| Used oil transporter: | No |
| Off-site waste receiver: | Commercial status unknown |

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING,

**USAF AEROSTAT SITE (Continued)** **1005905250**

BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U080
Waste name: METHANE, DICHLORO-

Waste code: U161
Waste name: METHYL ISOBUTYL KETONE (I)

Waste code: U220
Waste name: BENZENE, METHYL-

Waste code: U239
Waste name: BENZENE, DIMETHYL- (I,T)

Violation Status: No violations found

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**A2** **USAF TETHERED AEROSTAT RADAR SYSTEM SITE** **NPDES** **S108338762**
**Target** **4535 HWY 83** **N/A**
**Property** **GLENCOE, LA 70538**

**Site 2 of 2 in cluster A**

**Actual:**
**7 ft.**

NPDES:

| | |
|---|---|
| Facility Id: | 85448 |
| Facility Phone: | 3379237037 |
| Issued Date: | 5/7/2004 |
| Title Description: | LAG750438 Reauthorization |
| Permit Type Description: | Gen-LAG75-Exterior Vehicle Wash |
| Program: | Water |
| Activity Number: | GEN20040001 |

| | |
|---|---|
| Facility Id: | 85448 |
| Facility Phone: | 3379237037 |
| Issued Date: | 12/18/2002 |
| Title Description: | LAG750438-Permit |
| Permit Type Description: | Gen-LAG75-Exterior Vehicle Wash |
| Program: | Water |
| Activity Number: | GEN20020001 |

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| CENTERVILLE | U003987554 | CENTERVILLE SHELL | HWY 182 | 70538 | UST |
| CYPREMORT POINT | 1000427909 | IVANHOE CARBON BLACK PLANT | HWY 83 25M S OF NEW IBERIA | 70538 | SHWS, TRIS, CERC-NFRAP, RCRA-CESQG |
| FRANKLIN | U003925118 | D&T | 15897 HWY 182 W | 70538 | UST |
| FRANKLIN | U001893838 | COLUMBIA MOBIL | 15199 HWY 182 | 70538 | UST |
| FRANKLIN | S107026461 | BAYOU SALE PRODUCTION FACILITY | 6972 HWY 317 | 70538 | SHWS |
| FRANKLIN | 1007202507 | TRUNKLINE GAS CO - M & R 80256 | HWY 317 | 70538 | RCRA-LQG |
| FRANKLIN | 1004713595 | A & W ENGINE SVC | 1030 HWY 317 | 70538 | FINDS, RCRA-CESQG |
| FRANKLIN | U004010469 | GLENCOE CHARTER SCHOOL | 4491 HWY 83 | 70538 | UST |
| FRANKLIN | U003926119 | KAY TERRY | 4686 HWY 83 | 70538 | UST |
| FRANKLIN | U000213117 | TERRY'S SUPPLY | HWY 83 | 70538 | UST, HIST LUST |
| FRANKLIN | U004109281 | TECHE SUGAR MILL | 2817 HWY 87 | 70538 | UST |
| FRANKLIN | 1004514763 | CHARENTON TERMINAL | 6025 HWY 87 | 70538 | RCRA-LQG |
| FRANKLIN | 1010162638 | GARDEN CITY PRODUCTION | FACILITY | 70538 | FINDS |
| FRANKLIN | U000216892 | HANSON MAINTENANCE BARN | 10905 A HWY 182 | 70538 | UST, HIST LUST |
| FRANKLIN | 1006199614 | NORTHWEST CORP | 1401 LA HWY 3211 | 70538 | FINDS, UST, NPDES |
| FRANKLIN | 1001217026 | TECHE SUGAR MILL | 2817 LOUISIANA HIGHWAY 27 | 70538 | CERCLIS, FINDS, RCRA-LQG |
| FRANKLIN | 1006770270 | GARDEN CITY PRODUCTION FACILITY | 1.5 MI S OF | 70538 | FINDS, NPDES |
| FRANKLINTON | U001893161 | RAMSHUR'S GROCERY | LA HWY 62 | 70538 | UST |
| GLENCOE | U003923380 | MCLEAN'S GROCERY | 886 HWY 318 | | LUST, UST |
| VERDUNVILLE | U001895184 | VERDUNVILLE EXXON | HWY 182 | 70538 | UST |
| VERDUNVILLE | U000875722 | CLAUSEN'S GENERAL MERCHANDISE | 7716 HWY 182 | 70538 | LUST, UST |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/29/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/29/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: No Update Planned

***Federal Delisted NPL site list***

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

| | |
|---|---|
| Date of Government Version: 09/29/2008 | Source: EPA |
| Date Data Arrived at EDR: 10/10/2008 | Telephone: N/A |
| Date Made Active in Reports: 11/19/2008 | Last EDR Contact: 09/29/2008 |
| Number of Days to Update: 40 | Next Scheduled EDR Contact: 01/26/2009 |
| | Data Release Frequency: Quarterly |

***Federal CERCLIS list***

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

| | |
|---|---|
| Date of Government Version: 10/07/2008 | Source: EPA |
| Date Data Arrived at EDR: 10/16/2008 | Telephone: 703-412-9810 |
| Date Made Active in Reports: 12/08/2008 | Last EDR Contact: 01/16/2009 |
| Number of Days to Update: 53 | Next Scheduled EDR Contact: 04/13/2009 |
| | Data Release Frequency: Quarterly |

***Federal CERCLIS NFRAP site List***

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

| | |
|---|---|
| Date of Government Version: 12/03/2007 | Source: EPA |
| Date Data Arrived at EDR: 12/06/2007 | Telephone: 703-412-9810 |
| Date Made Active in Reports: 02/20/2008 | Last EDR Contact: 01/12/2009 |
| Number of Days to Update: 76 | Next Scheduled EDR Contact: 03/16/2009 |
| | Data Release Frequency: Quarterly |

***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

| | |
|---|---|
| Date of Government Version: 09/11/2008 | Source: EPA |
| Date Data Arrived at EDR: 09/19/2008 | Telephone: 800-424-9346 |
| Date Made Active in Reports: 10/16/2008 | Last EDR Contact: 12/01/2008 |
| Number of Days to Update: 27 | Next Scheduled EDR Contact: 03/02/2009 |
| | Data Release Frequency: Quarterly |

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

***Federal RCRA generators list***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

***Federal institutional controls / engineering controls registries***

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/21/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Annually

***State- and tribal - equivalent CERCLIS***

SHWS: Potential and Confirmed Sites List

Confirmed status denotes that assessments have been performed and a determination made that (1) hazardous waste(s) or substance(s) are present at the site and (2) these sites are under the jurisdiction of the LDEQ/RSD. Potential status is an indicator that sites are either waiting to be assessed or the assessment is in progress.

Date of Government Version: 11/06/2008
Date Data Arrived at EDR: 12/08/2008
Date Made Active in Reports: 12/17/2008
Number of Days to Update: 9

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Quarterly

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF: Landfill List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/05/2008
Date Data Arrived at EDR: 11/13/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 8

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 01/05/2009
Next Scheduled EDR Contact: 04/06/2009
Data Release Frequency: Annually

DEBRIS: LDEQ Approved Debris Sites

A listing of LDEQ Approved Debris Sites where hurricane debris is dumped.

Date of Government Version: 09/12/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 21

Source: Department of Environmental Quality
Telephone: 225-219-3953
Last EDR Contact: 12/23/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Varies

***State and tribal leaking storage tank lists***

LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 11/05/2008
Date Data Arrived at EDR: 12/08/2008
Date Made Active in Reports: 12/17/2008
Number of Days to Update: 9

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

HIST LUST: Underground Storage Tank Case History Incidents

This listing includes detailed information for Leaking Underground Storage Tanks reported through November 1999. It is no longer updated. Current LUST incidents, without detail, can be found in the Leaking Underground Storage Tank Database

Date of Government Version: 11/01/1999
Date Data Arrived at EDR: 02/16/2000
Date Made Active in Reports: 05/01/2000
Number of Days to Update: 75

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 12/04/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/06/2008
Date Data Arrived at EDR: 10/09/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 41

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/25/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 27

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2008
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 34

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 12/02/2008
Date Data Arrived at EDR: 12/04/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 19

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/03/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 20

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/19/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

***State and tribal registered storage tank lists***

UST: Louisiana Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/18/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 11

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 11/18/2008
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 34

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 12/01/2008
Date Data Arrived at EDR: 12/04/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 19

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
No description is available for this data

| | |
|---|---|
| Date of Government Version: 06/01/2007 | Source: EPA Region 7 |
| Date Data Arrived at EDR: 06/14/2007 | Telephone: 913-551-7003 |
| Date Made Active in Reports: 07/05/2007 | Last EDR Contact: 11/19/2008 |
| Number of Days to Update: 21 | Next Scheduled EDR Contact: 02/16/2009 |
| | Data Release Frequency: Varies |

INDIAN UST R6: Underground Storage Tanks on Indian Land
No description is available for this data

| | |
|---|---|
| Date of Government Version: 11/25/2008 | Source: EPA Region 6 |
| Date Data Arrived at EDR: 11/26/2008 | Telephone: 214-665-7591 |
| Date Made Active in Reports: 12/23/2008 | Last EDR Contact: 11/17/2008 |
| Number of Days to Update: 27 | Next Scheduled EDR Contact: 02/16/2009 |
| | Data Release Frequency: Semi-Annually |

INDIAN UST R5: Underground Storage Tanks on Indian Land
No description is available for this data

| | |
|---|---|
| Date of Government Version: 09/08/2008 | Source: EPA Region 5 |
| Date Data Arrived at EDR: 09/19/2008 | Telephone: 312-886-6136 |
| Date Made Active in Reports: 10/16/2008 | Last EDR Contact: 11/17/2008 |
| Number of Days to Update: 27 | Next Scheduled EDR Contact: 02/16/2009 |
| | Data Release Frequency: Varies |

INDIAN UST R4: Underground Storage Tanks on Indian Land
No description is available for this data

| | |
|---|---|
| Date of Government Version: 06/06/2008 | Source: EPA Region 4 |
| Date Data Arrived at EDR: 10/09/2008 | Telephone: 404-562-9424 |
| Date Made Active in Reports: 11/19/2008 | Last EDR Contact: 11/17/2008 |
| Number of Days to Update: 41 | Next Scheduled EDR Contact: 02/16/2009 |
| | Data Release Frequency: Semi-Annually |

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

| | |
|---|---|
| Date of Government Version: 03/12/2008 | Source: EPA, Region 1 |
| Date Data Arrived at EDR: 03/14/2008 | Telephone: 617-918-1313 |
| Date Made Active in Reports: 03/20/2008 | Last EDR Contact: 11/17/2008 |
| Number of Days to Update: 6 | Next Scheduled EDR Contact: 02/16/2009 |
| | Data Release Frequency: Varies |

***State and tribal institutional control / engineering control registries***

AUL: Listing of Institutional and/or Enginnering Controls
A notice of contamination (nature and levels of contaminants) and restriction of property to non-residential use are placed in the conveyance records for the property.

| | |
|---|---|
| Date of Government Version: 05/15/2007 | Source: Department of Environmental Quality |
| Date Data Arrived at EDR: 06/05/2007 | Telephone: 225-219-3168 |
| Date Made Active in Reports: 07/12/2007 | Last EDR Contact: 11/10/2008 |
| Number of Days to Update: 37 | Next Scheduled EDR Contact: 02/09/2009 |
| | Data Release Frequency: Quarterly |

***State and tribal voluntary cleanup sites***

VCP: Voluntary Remediation Program Sites
Sites that have entered the Department of Environmental Quality's Voluntary Remediation Program

Date of Government Version: 08/26/2008
Date Data Arrived at EDR: 11/12/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 9

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

## ADDITIONAL ENVIRONMENTAL RECORDS

### *Local Brownfield lists*

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 11/14/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 01/16/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Semi-Annually

### *Local Lists of Landfill / Solid Waste Disposal Sites*

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 12/22/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Directory

A listing of recycling facilities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 10/08/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 44

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 01/08/2009
Next Scheduled EDR Contact: 04/06/2009
Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/24/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/31/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Quarterly

***Local Land Records***

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/19/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Varies

LIENS: Environmental Liens

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC ? 9607(1) and similar state or local laws. In other words: a lien placed upon a property's title due to an environmental condition.

Date of Government Version: 11/17/2008
Date Data Arrived at EDR: 12/08/2008
Date Made Active in Reports: 12/17/2008
Number of Days to Update: 9

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 34

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/13/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Annually

SPILLS: Emergency Response Section Incidents

Spills and/or releases, to land, reported to the Emergency Response Section.

Date of Government Version: 09/29/2008
Date Data Arrived at EDR: 10/15/2008
Date Made Active in Reports: 12/17/2008
Number of Days to Update: 63

Source: Department of Environmental Quality
Telephone: 225-219-3620
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Varies

***Other Ascertainable Records***

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/26/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/15/2008
Date Data Arrived at EDR: 10/22/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 62

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/21/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 55

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/07/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/23/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/19/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 12/15/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 12/15/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 12/04/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/18/2008
Next Scheduled EDR Contact: 11/03/2008
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/03/2008
Date Data Arrived at EDR: 10/15/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 35

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/28/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/30/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: EPA
Telephone: (214) 665-2200
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/09/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaner Facility Listing

A listing of drycleaner facilities.

Date of Government Version: 01/22/2007
Date Data Arrived at EDR: 01/30/2007
Date Made Active in Reports: 03/22/2007
Number of Days to Update: 51

Source: Department of Environmental Quality
Telephone: 225-219-3168
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

NPDES: LPDES Permits Database

A listing of sites with a Louisiana Pollutant Discharge Elimination System (LPDES) program issued permit.

Date of Government Version: 08/19/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 11

Source: Department of Environmental Quality
Telephone: 225-219-3181
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

| | |
|---|---|
| Date of Government Version: 12/31/2005 | Source: USGS |
| Date Data Arrived at EDR: 12/08/2006 | Telephone: 202-208-3710 |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 11/07/2008 |
| Number of Days to Update: 34 | Next Scheduled EDR Contact: 02/02/2009 |
| | Data Release Frequency: Semi-Annually |

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

| | |
|---|---|
| Date of Government Version: 09/08/2008 | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 09/10/2008 | Telephone: 615-532-8599 |
| Date Made Active in Reports: 09/23/2008 | Last EDR Contact: 12/08/2008 |
| Number of Days to Update: 13 | Next Scheduled EDR Contact: 02/09/2009 |
| | Data Release Frequency: Varies |

PWS: Public Water System Data

This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

| | |
|---|---|
| Date of Government Version: 02/24/2000 | Source: EPA |
| Date Data Arrived at EDR: 04/27/2005 | Telephone: N/A |
| Date Made Active in Reports: N/A | Last EDR Contact: 12/29/2008 |
| Number of Days to Update: 0 | Next Scheduled EDR Contact: 03/30/2009 |
| | Data Release Frequency: N/A |

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

| | |
|---|---|
| Date of Government Version: 12/31/2005 | Source: U.S. Geological Survey |
| Date Data Arrived at EDR: 02/06/2006 | Telephone: 888-275-8747 |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 11/07/2008 |
| Number of Days to Update: 339 | Next Scheduled EDR Contact: 02/02/2009 |
| | Data Release Frequency: N/A |

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

| | |
|---|---|
| Date of Government Version: 07/09/2008 | Source: EPA |
| Date Data Arrived at EDR: 09/30/2008 | Telephone: 202-564-6064 |
| Date Made Active in Reports: 10/07/2008 | Last EDR Contact: 12/29/2008 |
| Number of Days to Update: 7 | Next Scheduled EDR Contact: 03/30/2009 |
| | Data Release Frequency: Quarterly |

**EDR PROPRIETARY RECORDS**

***EDR Proprietary Records***

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

**COUNTY RECORDS**

ORLEANS COUNTY:

Brownfields Inventory

Brownfields are abandoned, idled, or underused industrial or commercial real property, the expansion, redevelopment or reuse of which may be complicated by the presence of or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 11/10/2008
Date Data Arrived at EDR: 11/12/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 9

Source: New Orleans Office of Environmental Affairs
Telephone: 504-658-4070
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Quarterly

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 06/15/2007
Date Made Active in Reports: 08/20/2007
Number of Days to Update: 66

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 12/11/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/21/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/11/2008
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/26/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/02/2008
Number of Days to Update: 21

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 01/05/2009
Next Scheduled EDR Contact: 04/06/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

**STREET AND ADDRESS INFORMATION**

# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

MORGAN CITY TARS SITE
4535 HWY 83
GLENCOE, LA 70538

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 29.81010 - 29˚ 48’ 36.4’’ |
| Longitude (West): | 91.6631 - 91˚ 39’ 47.2’’ |
| Universal Tranverse Mercator: | Zone 15 |
| UTM X (Meters): | 629194.2 |
| UTM Y (Meters): | 3298313.2 |
| Elevation: | 7 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 29091-G6 KEMPER, LA |
| Most Recent Revision: | 1994 |

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

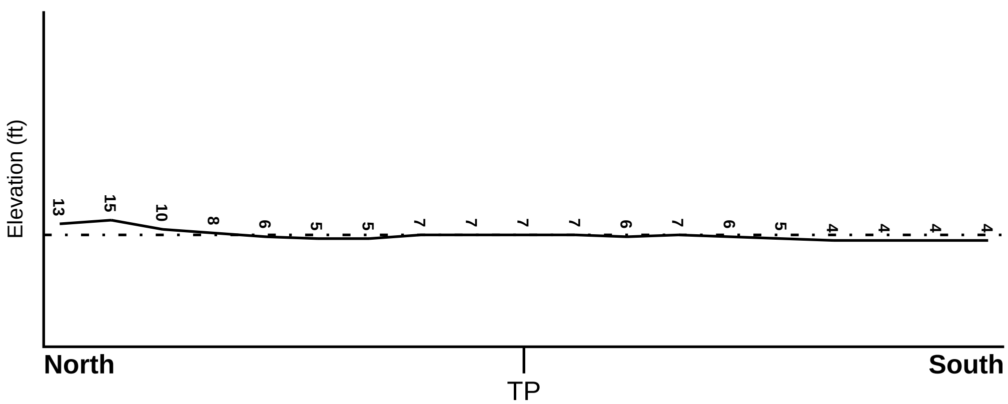
**TOPOGRAPHIC INFORMATION**

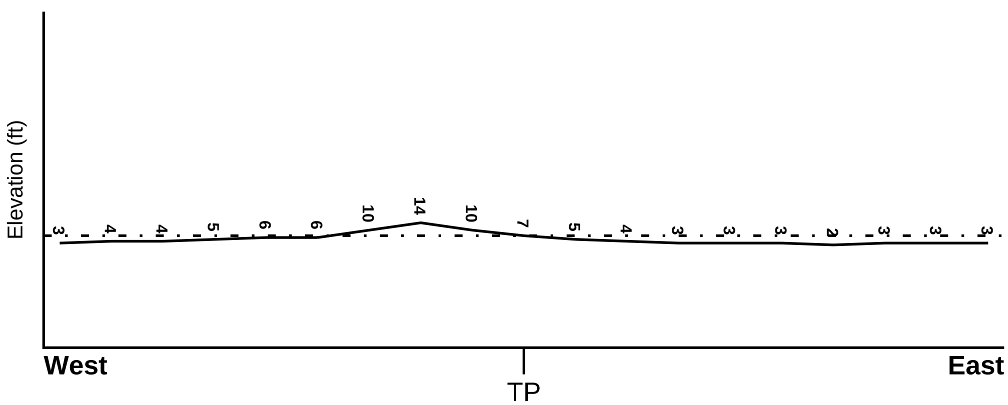
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

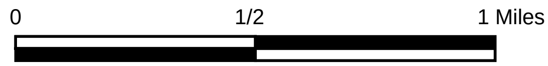
General Topographic Gradient: General East

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 7 ft.**




Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Target Property County | FEMA Flood Electronic Data |
|---|---|
| ST MARY, LA | YES - refer to the Overview Map and Detail Map |

Flood Plain Panel at Target Property: 2201920125C

Additional Panels in search area: 2201920100C

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| KEMPER | Not Available |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

Search Radius: 1.25 miles
Status: Not found

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

## GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

## GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

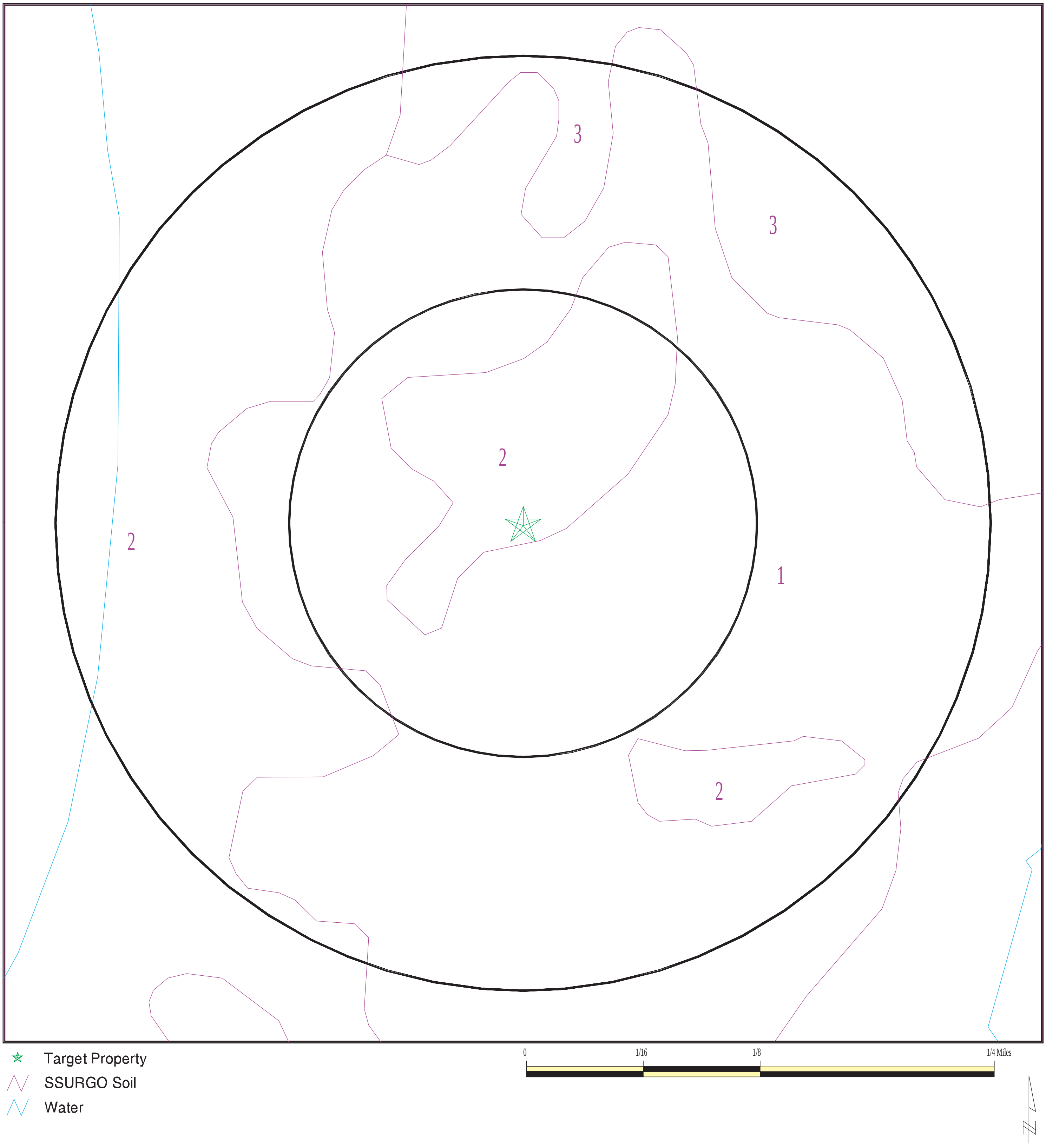
| | |
|---|---|
| Era: | Cenozoic |
| System: | Quaternary |
| Series: | Holocene |
| Code: | Qh *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 2403077.2s




| | | | |
|---|---|---|---|
| SITE NAME: | Morgan City TARS site | CLIENT: | Environmental Express Serv,EES |
| ADDRESS: | 4535 HWY 83 | CONTACT: | Donna Taylor |
| | Glencoe LA 70538 | INQUIRY #: | 2403077.2s |
| LAT/LONG: | 29.8101 / 91.6631 | DATE: | January 20, 2009 5:13 pm |

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

---

**Soil Map ID: 1**

Soil Component Name: LOREAUVILLE

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 53 inches

**Soil Layer Information**

| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | |
|---|---|---|---|---|---|---|---|
| **Layer** | **Upper** | **Lower** | **Soil Texture Class** | **AASHTO Group** | **Unified Soil** | | **Soil Reaction (pH)** |
| 1 | 0 inches | 5 inches | silt loam | Not reported | Not reported | Max: 14.11 Min: 4.23 | Max: 8.4 Min: 7.4 |
| 2 | 5 inches | 20 inches | silty clay loam | Not reported | Not reported | Max: 14.11 Min: 4.23 | Max: 8.4 Min: 7.4 |
| 3 | 20 inches | 79 inches | loam | Not reported | Not reported | Max: 14.11 Min: 4.23 | Max: 8.4 Min: 7.4 |

---

**Soil Map ID: 2**

Soil Component Name: GALVEZ

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 7 inches | silt loam | Not reported | Not reported | Max: 4.23 Min: 1.41 | Max: 8.4 Min: 7.4 |
| 2 | 7 inches | 83 inches | silt loam | Not reported | Not reported | Max: 4.23 Min: 1.41 | Max: 8.4 Min: 7.4 |
| 3 | 83 inches | 90 inches | silty clay | Not reported | Not reported | Max: 4.23 Min: 1.41 | Max: 8.4 Min: 7.4 |

**Soil Map ID: 3**

Soil Component Name: IBERIA

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 16 inches | clay | Not reported | Not reported | Max: 1.41 Min: 0 | Max: 8.4 Min: 6.6 |
| 2 | 16 inches | 37 inches | clay | Not reported | Not reported | Max: 1.41 Min: 0 | Max: 8.4 Min: 6.6 |

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 3 | 37 inches | 79 inches | silty clay loam | Not reported | Not reported | Max: 1.41<br>Min: 0 | Max: 8.4<br>Min: 6.6 |

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

### FEDERAL USGS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| A2 | USGS2491541 | 1/8 - 1/4 Mile WNW |
| A5 | USGS2491537 | 1/8 - 1/4 Mile West |
| A6 | USGS2491538 | 1/8 - 1/4 Mile West |

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| A1 | LA1101004 | 1/8 - 1/4 Mile West |

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

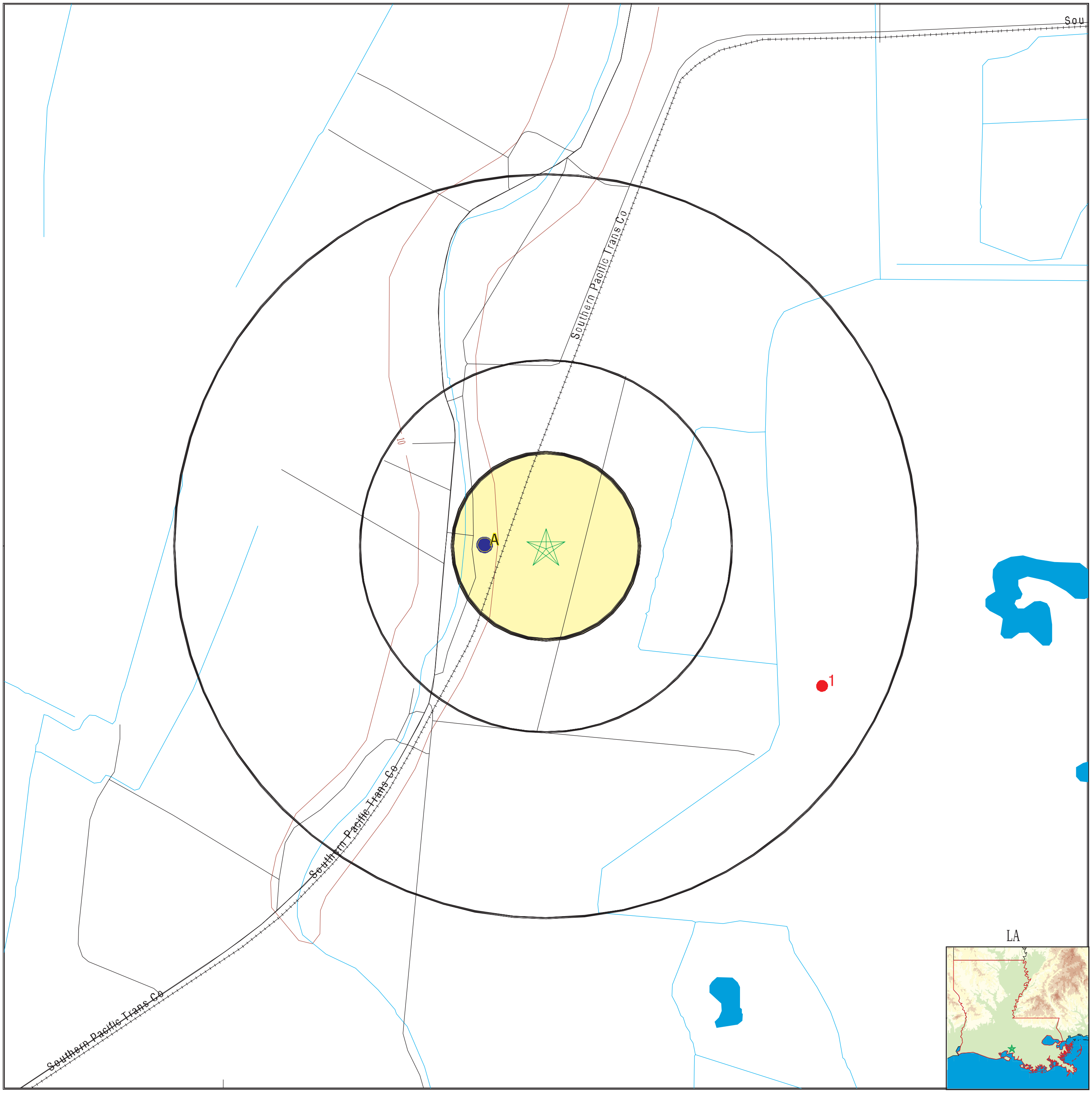
| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| A3 | 1101004001 | 1/8 - 1/4 Mile West |
| A4 | 1101004002 | 1/8 - 1/4 Mile West |

## OTHER STATE DATABASE INFORMATION

### STATE OIL/GAS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | LAOG30000052274 | 1/2 - 1 Mile ESE |

# PHYSICAL SETTING SOURCE MAP - 2403077.2s




County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location
Closest Hydrogeological Data
Oil, gas or related wells

| | | | |
|---|---|---|---|
| SITE NAME: | Morgan City TARS site | CLIENT: | Environmental Express Serv,EES |
| ADDRESS: | 4535 HWY 83 | CONTACT: | Donna Taylor |
| | Glencoe LA 70538 | INQUIRY #: | 2403077.2s |
| LAT/LONG: | 29.8101 / 91.6631 | DATE: | January 20, 2009 5:13 pm |

| Map ID<br>Direction<br>Distance<br>Elevation | Database | EDR ID Number |
|---|---|---|
| **A1**<br>**West**<br>**1/8 - 1/4 Mile**<br>**Higher** | **FRDS PWS** | **LA1101004** |

| | | | |
|---|---|---|---|
| PWS ID: | LA1101004 | PWS Status: | Not Reported |
| Date Initiated: | Not Reported | Date Deactivated: | Not Reported |
| PWS Name: | GLENCOE COMM WATER SYSTE<br>4607 LA HWY 83<br>FRANKLIN,  LA 70538 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 1909 | | |
| Facility name: | HYDROPNEUMATIC | | |
| Facility type: | Storage | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 4133 | | |
| Facility name: | WELL #1 | | |
| Facility type: | Treatment_plant | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 7390 | | |
| Facility name: | WELL #1 | | |
| Facility type: | Well | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |

| | | | |
|---|---|---|---|
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 7391 | | |
| Facility name: | WELL #2 | | |
| Facility type: | Well | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 9189 | | |
| Facility name: | GLENCOE COMM WATER SYSTE | | |
| Facility type: | Distribution_system_zone | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Pwsid: | LA1101004 | Epa region: | 06 |
| State: | LA | County: | St. Mary |
| Pws name: | GLENCOE COMM WATER SYSTEM | | |
| Population Served: | 352 | Pwssvcconn: | 122 |
| PWS Source: | Groundwater | | |
| Pws type: | CWS | | |
| Status: | Active | Owner type: | Local_Govt |
| Facility id: | 993 | | |
| Facility name: | GROUND | | |
| Facility type: | Storage | Treatment process: | hypochlorination, post |
| Treatment objective: | disinfection | | |
| Contact name: | SAUCIER, RICKY | | |
| Original name: | SAUCIER, RICKY | | |
| Contact phone: | 337-201-1165 | Contact address1: | ST MARY WATERWORKS DISTRICT #7 |
| Contact address2: | 129 WEST PERSHING | Contact city: | NEW IBERIA |
| Contact zip: | 70560 | | |

| | | | |
|---|---|---|---|
| Addressee / Facility: | Operator<br>KAY N TERRY | | |
| Facility Latitude: | 29 48 35.0000 | Facility Longitude: | 91 39 56.0000 |
| City Served: | Not Reported | | |
| Treatment Class: | Treated | Population: | 352 |

Violations information not reported.

**ENFORCEMENT INFORMATION:**

| | | | |
|---|---|---|---|
| Truedate: | 03/31/2008 | Pwsid: | LA1101004 |
| Pwsname: | GLENCOE COMM WATER SYSTEM | | |
| Retpopsrvd: | 352 | Pwstypecod: | C |
| Vioid: | 1V00 | Contaminant: | 7000 |
| Viol. Type: | CCR Complete Failure to Report | | |
| Complperbe: | 10/19/1999 0:00:00 | | |
| Complperen: | 7/10/2000 0:00:00 | Enfdate: | 4/11/2000 0:00:00 |
| Enf action: | Fed Formal NOV Issued | | |
| Violmeasur: | 0 | | |

| | | | |
|---|---|---|---|
| Truedate: | 03/31/2008 | Pwsid: | LA1101004 |
| Pwsname: | GLENCOE COMM WATER SYSTEM | | |
| Retpopsrvd: | 352 | Pwstypecod: | C |
| Vioid: | 1V00 | Contaminant: | 7000 |
| Viol. Type: | CCR Complete Failure to Report | | |
| Complperbe: | 10/19/1999 0:00:00 | | |
| Complperen: | 7/10/2000 0:00:00 | Enfdate: | 7/10/2000 0:00:00 |
| Enf action: | 0 | | |
| Violmeasur: | Not Reported | | |

| | | | |
|---|---|---|---|
| Truedate: | 03/31/2008 | Pwsid: | LA1101004 |
| Pwsname: | GLENCOE COMM WATER SYSTEM | | |
| Retpopsrvd: | 352 | Pwstypecod: | C |
| Vioid: | 1V00 | Contaminant: | 7000 |
| Viol. Type: | CCR Complete Failure to Report | | |
| Complperbe: | 10/19/1999 0:00:00 | | |
| Complperen: | 7/10/2000 0:00:00 | Enfdate: | 7/10/2000 0:00:00 |
| Enf action: | Fed Compliance Achieved | | |
| Violmeasur: | 0 | | |

| | | | |
|---|---|---|---|
| Truedate: | 03/31/2008 | Pwsid: | LA1101004 |
| Pwsname: | GLENCOE COMM WATER SYSTEM | | |
| Retpopsrvd: | 352 | Pwstypecod: | C |
| Vioid: | 1V00 | Contaminant: | 7000 |
| Viol. Type: | CCR Complete Failure to Report | | |
| Complperbe: | 10/19/1999 0:00:00 | | |
| Complperen: | 7/10/2000 0:00:00 | Enfdate: | 4/11/2000 0:00:00 |
| Enf action: | 0 | | |
| Violmeasur: | Not Reported | | |

| | | | |
|---|---|---|---|
| System Name: | GLENCOE COMM WATER SYSTE | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 1999-10-19 - 2015-12-31 | | |
| Violation ID: | 00V0001 | | |
| Enforcement Date: | 2000-04-11 | Enf. Action: | Fed Formal NOV Issued |

**ENFORCEMENT INFORMATION:**

| | | | |
|---|---|---|---|
| System Name: | GLENCOE COMM WATER SYSTE | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 1999-10-19 - 2015-12-31 | | |
| Violation ID: | 00V0001 | | |
| Enforcement Date: | 2000-04-11 | Enf. Action: | Fed Formal NOV Issued |
| System Name: | GLENCOE COMM WATER SYSTE | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 1999-10-19 - 2015-12-31 | | |
| Violation ID: | 00V0001 | | |
| Enforcement Date: | Not Reported | Enf. Action: | Not Reported |
| System Name: | GLENCOE COMM WATER SYSTEM | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 10/19/99 - 07/10/00 | | |
| Violation ID: | 1V00 | | |
| Enforcement Date: | 07/10/00 | Enf. Action: | Fed Compliance Achieved |
| System Name: | GLENCOE COMM WATER SYSTEM | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 10/19/1999 0:00:00 - 7/10/2000 0:00:00 | | |
| Violation ID: | 1V00 | | |
| Enforcement Date: | 4/11/2000 0:00:00 | Enf. Action: | Fed Formal NOV Issued |
| System Name: | GLENCOE COMM WATER SYSTEM | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 10/19/1999 0:00:00 - 7/10/2000 0:00:00 | | |
| Violation ID: | 1V00 | | |
| Enforcement Date: | 7/10/2000 0:00:00 | Enf. Action: | Fed Compliance Achieved |
| System Name: | GLENCOE COMM WATER SYSTEM | | |
| Violation Type: | CCR Complete Failure to Report | | |
| Contaminant: | 7000 | | |
| Compliance Period: | 10/19/99 - 07/10/00 | | |
| Violation ID: | 1V00 | | |
| Enforcement Date: | 04/11/00 | Enf. Action: | Fed Formal NOV Issued |
| System Name: | GLENCOE COMM WATER SYSTE | | |
| Violation Type: | MCL, Monthly (TCR) | | |
| Contaminant: | COLIFORM (TCR) | | |
| Compliance Period: | 1998-03-15 - 1998-04-14 | | |
| Violation ID: | 98030004 | | |
| Enforcement Date: | Not Reported | Enf. Action: | Not Reported |

**CONTACT INFORMATION:**

| | | | |
|---|---|---|---|
| Name: | GLENCOE COMM WATER SYSTEM | Population: | 352 |
| Contact: | SAUCIER, RICKY | Phone: | 337-201-1165 |
| Address: | ST MARY WATERWORKS DISTRICT #7 | | |
| Address 2: | 129 WEST PERSHING | | |
| | NEW IBERIA, LA 70560 | | |

| Map ID<br>Direction<br>Distance<br>Elevation | | | Database | EDR ID Number |
|---|---|---|---|---|
| **A2**<br>**WNW**<br>**1/8 - 1/4 Mile**<br>**Higher** | | | **FED USGS** | **USGS2491541** |

| | | | |
|---|---|---|---|
| Agency cd: | USGS | Site no: | 294839091395601 |
| Site name: | SM- 45 | | |
| Latitude: | 294839 | | |
| Longitude: | 0913956 | Dec lat: | 29.81104016 |
| Dec lon: | -91.66567058 | Coor meth: | M |
| Coor accr: | F | Latlong datum: | NAD27 |
| Dec latlong datum: | NAD83 | District: | 22 |
| State: | 22 | County: | 101 |
| Country: | US | Land net: | S 27T14S R 8E |
| Location map: | JEANERETTE 207 | Map scale: | 62500 |
| Altitude: | Not Reported | | |
| Altitude method: | Not Reported | | |
| Altitude accuracy: | Not Reported | | |
| Altitude datum: | Not Reported | | |
| Hydrologic: | Vermilion. Louisiana. Area = 1760 sq.mi. | | |
| Topographic: | Not Reported | | |
| Site type: | Ground-water other than Spring | Date construction: | 19490901 |
| Date inventoried: | Not Reported | Mean greenwich time offset: | CST |
| Local standard time flag: | Y | | |
| Type of ground water site: | Single well, other than collector or Ranney type | | |
| Aquifer Type: | Not Reported | | |
| Aquifer: | CHICOT AQUIFER,UPPER | | |
| Well depth: | 699 | Hole depth: | Not Reported |
| Source of depth data: | Not Reported | | |
| Project number: | Not Reported | | |
| Real time data flag: | Not Reported | Daily flow data begin date: | Not Reported |
| Daily flow data end date: | Not Reported | Daily flow data count: | Not Reported |
| Peak flow data begin date: | Not Reported | Peak flow data end date: | Not Reported |
| Peak flow data count: | Not Reported | Water quality data begin date: | Not Reported |
| Water quality data end date: | Not Reported | Water quality data count: | Not Reported |
| Ground water data begin date: | Not Reported | Ground water data end date: | Not Reported |
| Ground water data count: | Not Reported | | |

Ground-water levels, Number of Measurements: 0

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| | | | | |
|---|---|---|---|---|
| **A3**<br>**West**<br>**1/8 - 1/4 Mile**<br>**Higher** | | | **LA WELLS** | **1101004001** |

| | | | |
|---|---|---|---|
| Site Name: | WELL #1 | | |
| Site ID: | 001 | | |
| Public Water Sys. ID: | 1101004 | Source: | CHICOT, UPPER S |
| Latitude/Longitude: | 2948354 / 9139568 | Total Depth: | Not Reported |
| Diameter: | 012 | Capacity: | 0 |
| Supply Name: | GLENCOE COMM WATER SYSTE<br>4607 LA HWY 83<br>FRANKLIN, LA 70538 | | |
| Parish: | ST MARY | FIPS County Code: | 101 |
| Owner: | GLENCOE COMM WATER SYSTE | System Type: | Comm |
| Contact1: | DEBRA G TERRY | | |
| Telephone1: | (318) 923 - 6181 | | |
| Contact2: | Not Reported | | |
| Telephone2: | Not Reported | | |

| Map ID<br>Direction<br>Distance<br>Elevation | | | Database | EDR ID Number |
|---|---|---|---|---|
| **A4**<br>**West**<br>**1/8 - 1/4 Mile**<br>**Higher** | | | **LA WELLS** | **1101004002** |

| | | | |
|---|---|---|---|
| Site Name: | WELL #2 | | |
| Site ID: | 002 | | |
| Public Water Sys. ID: | 1101004 | Source: | Not Reported |
| Latitude/Longitude: | 2948355 / 9139569 | Total Depth: | Not Reported |
| Diameter: | 006 | Capacity: | 0 |
| Supply Name: | GLENCOE COMM WATER SYSTE<br>4607 LA HWY 83<br>FRANKLIN, LA 70538 | | |
| Parish: | ST MARY | FIPS County Code: | 101 |
| Owner: | GLENCOE COMM WATER SYSTE | System Type: | Comm |
| Contact1: | DEBRA G TERRY | | |
| Telephone1: | (318) 923 - 6181 | | |
| Contact2: | Not Reported | | |
| Telephone2: | Not Reported | | |

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| | | | Database | EDR ID Number |
|---|---|---|---|---|
| **A5**<br>**West**<br>**1/8 - 1/4 Mile**<br>**Higher** | | | **FED USGS** | **USGS2491537** |

| | | | |
|---|---|---|---|
| Agency cd: | USGS | Site no: | 294835091395701 |
| Site name: | SM- 59 | | |
| Latitude: | 294835 | | |
| Longitude: | 0913957 | Dec lat: | 29.80992907 |
| Dec lon: | -91.66594837 | Coor meth: | M |
| Coor accr: | S | Latlong datum: | NAD27 |
| Dec latlong datum: | NAD83 | District: | 22 |
| State: | 22 | County: | 101 |
| Country: | US | Land net: | S 27T14S R 8E |
| Location map: | KEMPER 207C | Map scale: | 24000 |
| Altitude: | 10.00 | | |
| Altitude method: | Interpolated from topographic map | | |
| Altitude accuracy: | 5. | | |
| Altitude datum: | National Geodetic Vertical Datum of 1929 | | |
| Hydrologic: | Vermilion. Louisiana. Area = 1760 sq.mi. | | |
| Topographic: | Flat surface | | |
| Site type: | Ground-water other than Spring | Date construction: | 19681001 |
| Date inventoried: | Not Reported | Mean greenwich time offset: | CST |
| Local standard time flag: | Y | | |
| Type of ground water site: | Single well, other than collector or Ranney type | | |
| Aquifer Type: | Not Reported | | |
| Aquifer: | CHICOT AQUIFER,UPPER | | |
| Well depth: | 430 | Hole depth: | 609 |
| Source of depth data: | Not Reported | | |
| Project number: | Not Reported | | |
| Real time data flag: | 0 | Daily flow data begin date: | 0000-00-00 |
| Daily flow data end date: | 0000-00-00 | Daily flow data count: | 0 |
| Peak flow data begin date: | 0000-00-00 | Peak flow data end date: | 0000-00-00 |

| | | | |
|---|---|---|---|
| Peak flow data count: | 0 | Water quality data begin date: | 1968-08-02 |
| Water quality data end date: | 1976-05-06 | Water quality data count: | 3 |
| Ground water data begin date: | 1968-10-01 | Ground water data end date: | 1968-10-01 |
| Ground water data count: | 1 | | |

Ground-water levels, Number of Measurements: 1

| Date | Feet below Surface | Feet to Sealevel |
|---|---|---|
| 1968-10-01 | 12.50 | |

---

**A6**
**West**
**1/8 - 1/4 Mile**
**Higher**

**FED USGS USGS2491538**

| | | | |
|---|---|---|---|
| Agency cd: | USGS | Site no: | 294835091395702 |
| Site name: | SM- 78 | | |
| Latitude: | 294835 | | |
| Longitude: | 0913957 | Dec lat: | 29.80992907 |
| Dec lon: | -91.66594837 | Coor meth: | M |
| Coor accr: | S | Latlong datum: | NAD27 |
| Dec latlong datum: | NAD83 | District: | 22 |
| State: | 22 | County: | 101 |
| Country: | US | Land net: | S 27T14S R 8E |
| Location map: | KEMPER 207C | Map scale: | 24000 |
| Altitude: | 10. | | |
| Altitude method: | Interpolated from topographic map | | |
| Altitude accuracy: | 2.5 | | |
| Altitude datum: | National Geodetic Vertical Datum of 1929 | | |
| Hydrologic: | Vermilion. Louisiana. Area = 1760 sq.mi. | | |
| Topographic: | Not Reported | | |
| Site type: | Ground-water other than Spring | Date construction: | 19831220 |
| Date inventoried: | 19870930 | Mean greenwich time offset: | CST |
| Local standard time flag: | Y | | |
| Type of ground water site: | Single well, other than collector or Ranney type | | |
| Aquifer Type: | Not Reported | | |
| Aquifer: | CHICOT AQUIFER,UPPER | | |
| Well depth: | 428. | Hole depth: | 435. |
| Source of depth data: | driller | | |
| Project number: | Not Reported | | |
| Real time data flag: | 0 | Daily flow data begin date: | 0000-00-00 |
| Daily flow data end date: | 0000-00-00 | Daily flow data count: | 0 |
| Peak flow data begin date: | 0000-00-00 | Peak flow data end date: | 0000-00-00 |
| Peak flow data count: | 0 | Water quality data begin date: | 0000-00-00 |
| Water quality data end date: | 0000-00-00 | Water quality data count: | 0 |
| Ground water data begin date: | 1983-12-20 | Ground water data end date: | 1983-12-20 |
| Ground water data count: | 1 | | |

Ground-water levels, Number of Measurements: 1

| Date | Feet below Surface | Feet to Sealevel |
|---|---|---|
| 1983-12-20 | 12. | |

| Map ID<br>Direction<br>Distance | Database | EDR ID Number |
|---|---|---|
| **1**<br>**ESE**<br>**1/2 - 1 Mile** | **OIL_GAS** | **LAOG30000052274** |

| | | | |
|---|---|---|---|
| Well seria: | 9567 | Wlc line i: | 1 |
| Coordinate: | 01 | Received d: | 01-DEC-1976 |
| Lambert x: | 1899376 | Lambert y: | 413869 |
| Zone: | S | Create dat: | 02-MAY-1999 |
| Create use: | CONVALL | Update dat: | 19-SEP-2008 |
| Update use: | OPS$OOC | Coordinat1: | 03 |
| Coordinat2: | 1 | Ground ele: | Not Reported |
| Longitude : | 2.159 | Longitude1: | 39 |
| Longitude2: | 91 | Latitude s: | 15.839 |
| Latitude m: | 48 | Latitude d: | 29 |
| Surface la: | Not Reported | Surface lo: | Not Reported |
| Coordinat3: | 17 | G utmx: | 630394.258317577 |
| G utmy: | 3297902.06232338 | G laty: | 29.8046457555735 |
| G longx: | -91.650729785147 | Site id: | LAOG30000052274 |

**AREA RADON INFORMATION**

State Database: LA Radon

Radon Test Results

| Parish | Avg pCi/L | Total Sites |
|---|---|---|
| ST. MARY | 0.20000 | 17 |

Federal EPA Radon Zone for ST. MARY County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

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Federal Area Radon Information for Zip Code: 70538

Number of sites tested: 2

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 0.400 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | Not Reported | Not Reported | Not Reported | Not Reported |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5’ Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5’ Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5’ Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

**LOCAL / REGIONAL WATER AGENCY RECORDS**

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Louisiana Public Water Supply Wells
Source: Office of Public Health
Telephone: 504-568-5101

Water Well Registration Data File
Source: Department of Transportation and Development
Telephone: 225-274-4172

**OTHER STATE DATABASE INFORMATION**

Oil and Gas Well Database
Source: Department of Natural Resources
Telephone: 225-342-1977
Oil and gas well locations in Louisiana.

RADON

State Database: LA Radon
Source: Department of Environmenal Quality
Telephone: 225-925-1752
Radon Levels

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

**STREET AND ADDRESS INFORMATION**

**Morgan City TARS site**
4535 HWY 83
Glencoe, LA 70538

Inquiry Number: 2403077.3
January 20, 2009

# Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

1/20/09

| **Site Name:** | **Client Name:** |
|---|---|
| Morgan City TARS site | Environmental Express |
| 4535 HWY 83 | 5944 FM 1863 |
| Glencoe, LA 70538 | Bulverde, TX 78163 |
| EDR Inquiry # 2403077.3 | Contact: Donna Taylor |

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Environmental Express Serv,EES were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

***Certified Sanborn Results:***

| | |
|---|---|
| **Site Name:** | Morgan City TARS site |
| **Address:** | 4535 HWY 83 |
| **City, State, Zip:** | Glencoe, LA 70538 |
| **Cross Street:** | |
| **P.O. #** | NA |
| **Project:** | NA |
| **Certification #** | 31FA-4E0E-A6B8 |

THE SANBORN LIBRARY LLC Sanborn SEAL OF AUTHORITY™

Sanborn® Library search results
Certification # 31FA-4E0E-A6B8

## UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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**Morgan City TARS site**
4535 HWY 83
Glencoe, LA 70538

Inquiry Number: 2403077.4
January 21, 2009

# The EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

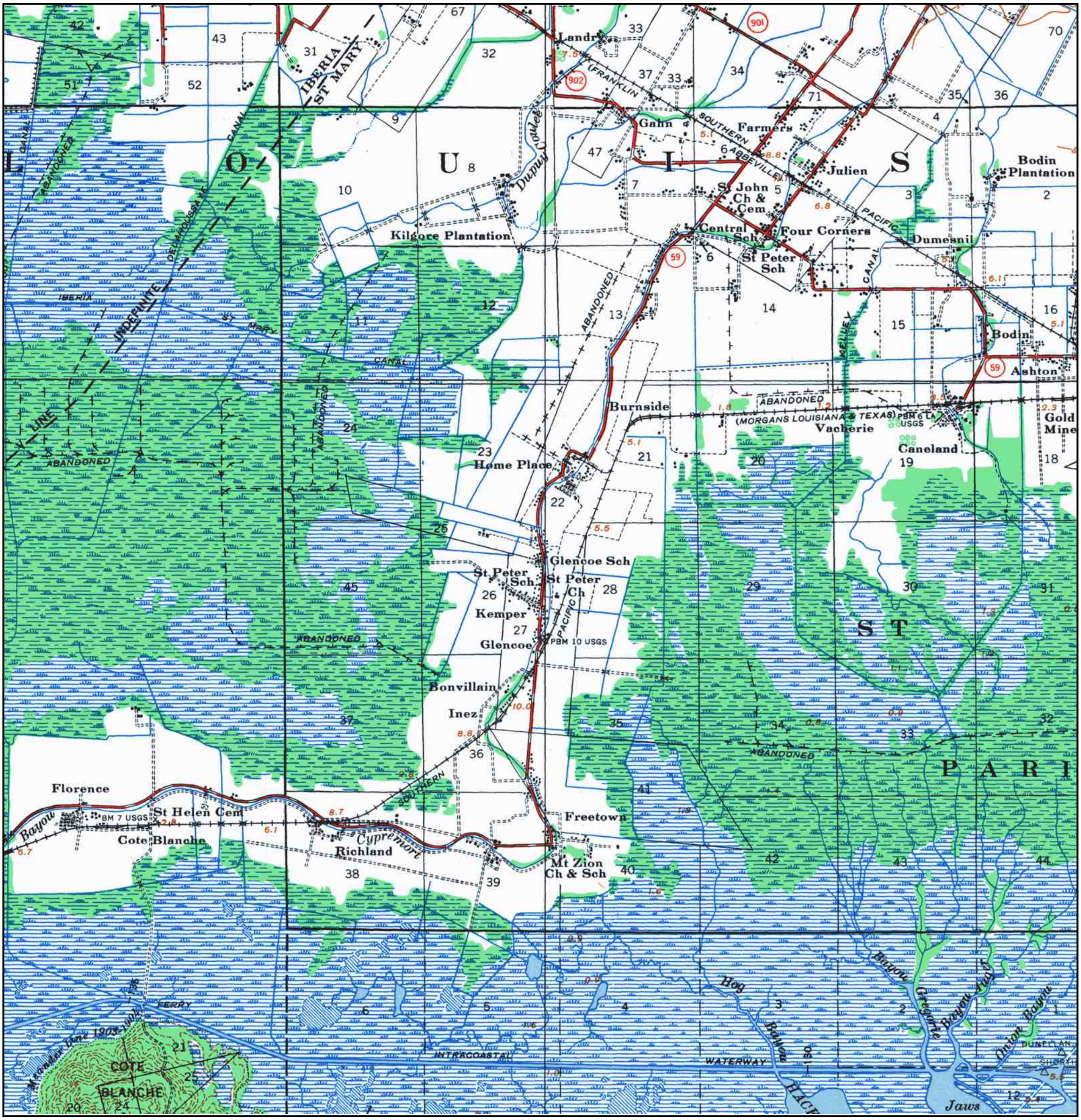
440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

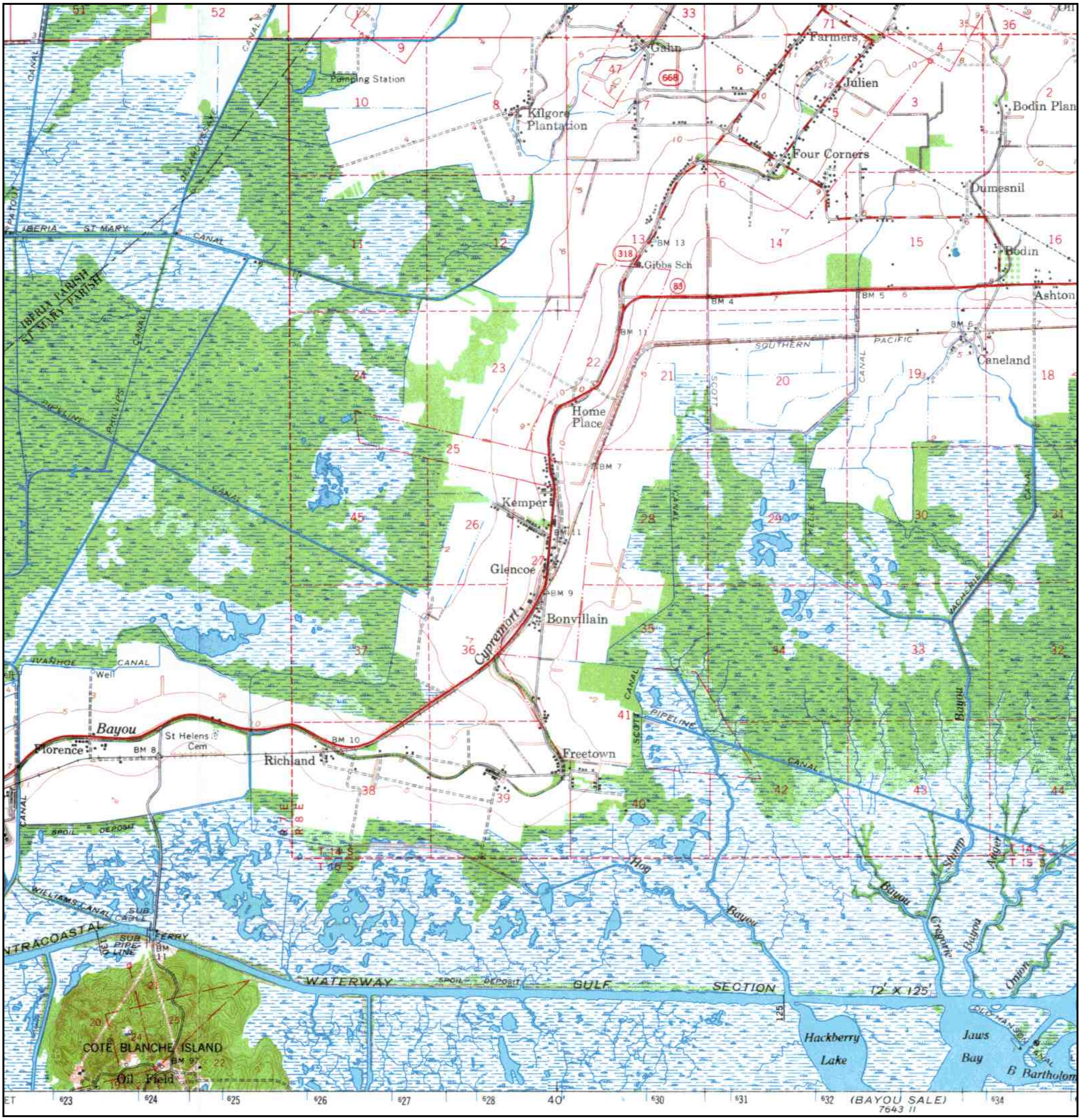
***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

# Historical Topographic Map



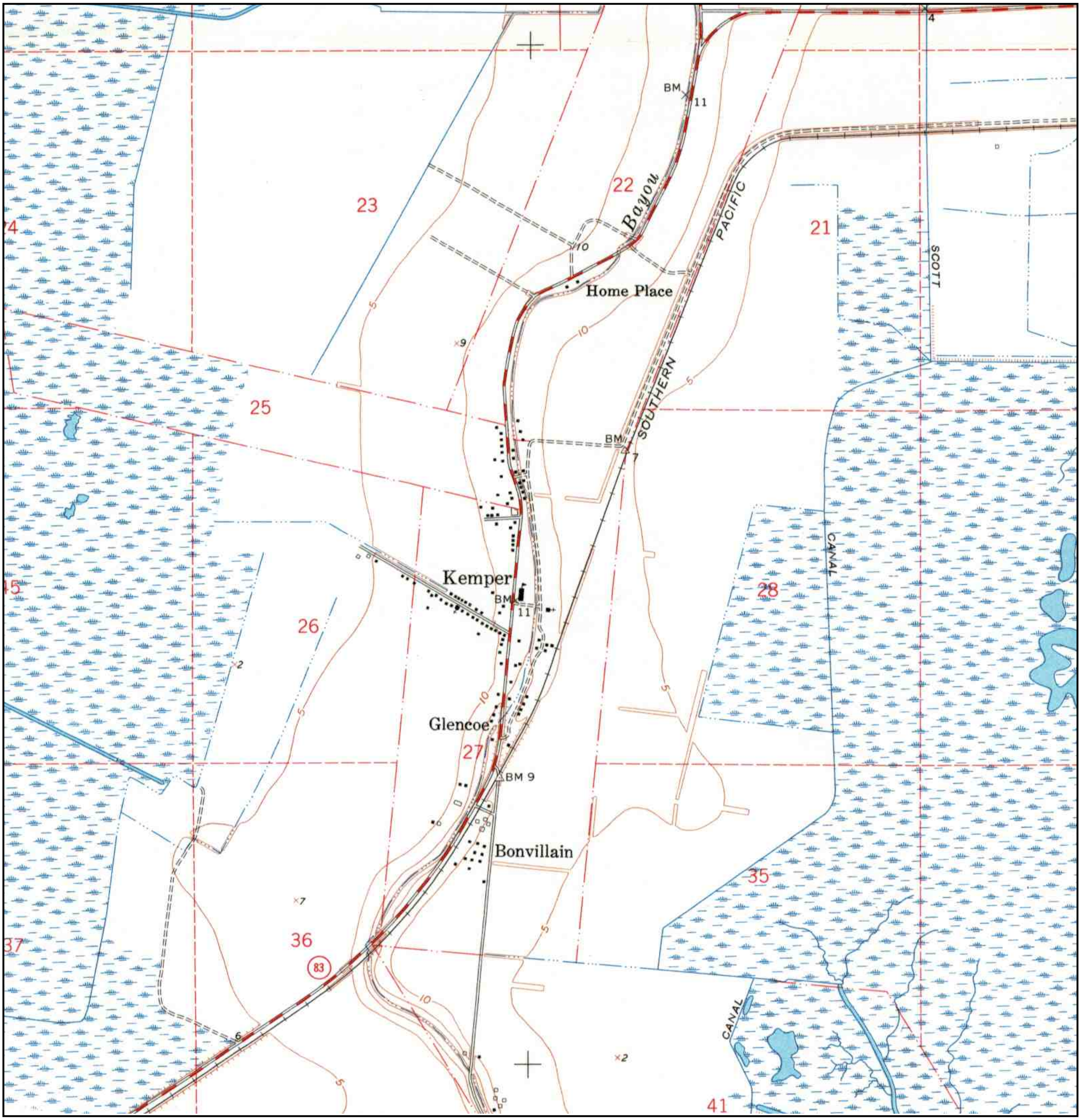

| N ↑ | TARGET QUAD<br>NAME: JEANERETTE<br>MAP YEAR: 1937<br><br>SERIES: 15<br>SCALE: 1:62500 | SITE NAME: Morgan City TARS site<br><br>ADDRESS: 4535 HWY 83<br>Glencoe, LA 70538<br>LAT/LONG: 29.8101 / 91.6631 | CLIENT: Environmental Express Serv,EES<br>CONTACT: Donna Taylor<br>INQUIRY#: 2403077.4<br>RESEARCH DATE: 01/21/2009 |
|---|---|---|---|

# Historical Topographic Map



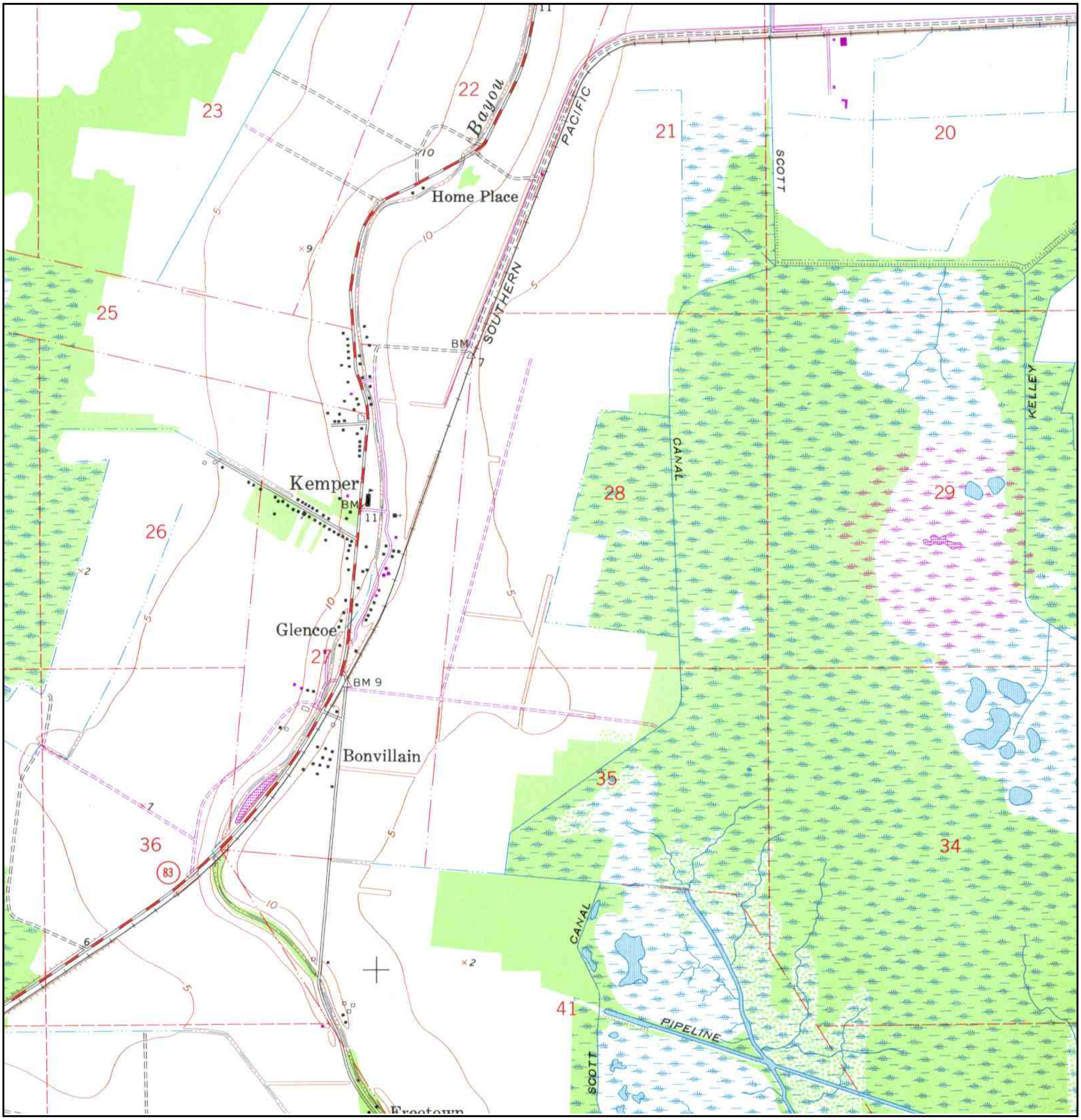

| N | TARGET QUAD NAME: JEANERETTE<br>MAP YEAR: 1963<br><br>SERIES: 15<br>SCALE: 1:62500 | SITE NAME: Morgan City TARS site<br><br>ADDRESS: 4535 HWY 83<br>Glencoe, LA 70538<br>LAT/LONG: 29.8101 / 91.6631 | CLIENT: Environmental Express Serv,EES<br>CONTACT: Donna Taylor<br>INQUIRY#: 2403077.4<br>RESEARCH DATE: 01/21/2009 |
|---|---|---|---|

# Historical Topographic Map




| | | | | | | |
|---|---|---|---|---|---|---|
| N | TARGET QUAD | | SITE NAME: | Morgan City TARS site | CLIENT: | Environmental Express Serv,EES |
| | NAME: | KEMPER | | | CONTACT: | Donna Taylor |
| | MAP YEAR: | 1963 | ADDRESS: | 4535 HWY 83 | INQUIRY#: | 2403077.4 |
| | | | | Glencoe, LA 70538 | RESEARCH DATE: | 01/21/2009 |
| | SERIES: | 7.5 | LAT/LONG: | 29.8101 / 91.6631 | | |
| | SCALE: | 1:24000 | | | | |

# Historical Topographic Map

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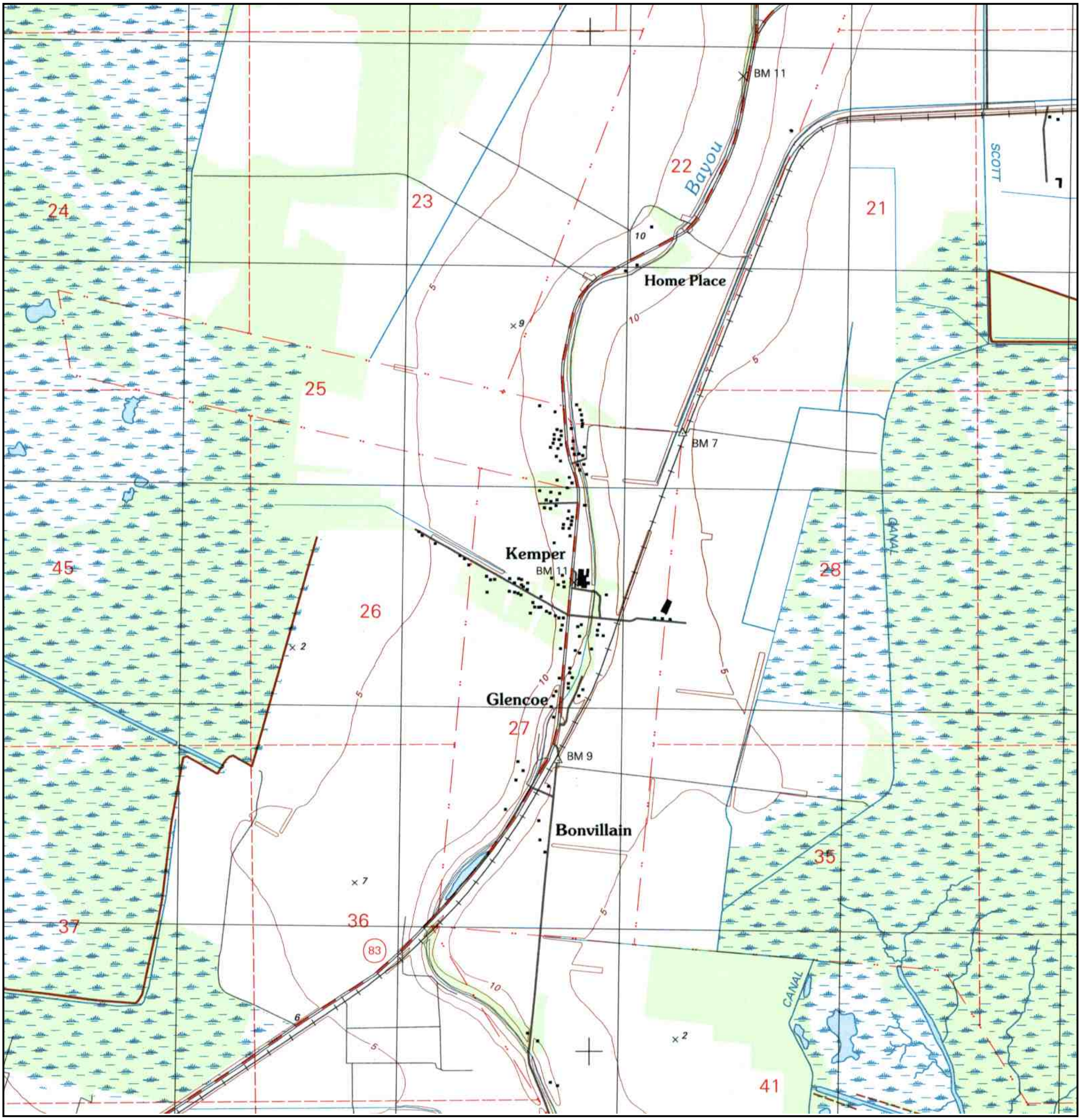
|---|---|---|---|

# Historical Topographic Map




| N | TARGET QUAD<br>NAME: KEMPER<br>MAP YEAR: 1994<br><br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: Morgan City TARS site<br><br>ADDRESS: 4535 HWY 83<br>Glencoe, LA 70538<br>LAT/LONG: 29.8101 / 91.6631 | CLIENT: Environmental Express Serv,EES<br>CONTACT: Donna Taylor<br>INQUIRY#: 2403077.4<br>RESEARCH DATE: 01/21/2009 |
|---|---|---|---|

**Morgan City TARS site**
4535 HWY 83
Glencoe, LA 70538

Inquiry Number: 2403077.5
January 26, 2009

# The EDR Aerial Photo Decade Package

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Please contact EDR at 1-800-352-0050
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## Date EDR Searched Historical Sources:

Aerial Photography January 26, 2009

## Target Property:

4535 HWY 83
Glencoe, LA 70538

| ***Year*** | ***Scale*** | ***Details*** | ***Source*** |
|---|---|---|---|
| 1956 | Aerial Photograph. Scale: 1"=1000' | Panel #: 2429091-G6/Flight Date: February 29, 1956 | EDR |
| 1983 | Aerial Photograph. Scale: 1"=1000' | Panel #: 2429091-G6/Flight Date: November 17, 1983 | EDR |
| 1990 | Aerial Photograph. Scale: 1"=750' | Panel #: 2429091-G6/Flight Date: October 11, 1990 | EDR |
| 2005 | Aerial Photograph. Scale: 1"=485' | Flight Year: 2005 | EDR |


INQUIRY #: 2403077.5
YEAR: 1956
= 1000'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2403077.5
YEAR: 1983
= 1000'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2403077.5
YEAR: 1990
= 750'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2403077.5
YEAR: 2005
= 485'
N

**Morgan City TARS site**
4535 HWY 83
Glencoe, LA 70538

Inquiry Number: 2403077.6
January 21, 2009

# The EDR-City Directory Abstract


Environmental Data Resources Inc

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# EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

This document reports that Environmental Data Resources, Inc. (EDR ) searched select national repositories of business directories, and based on client-supplied target property information, business directories including the target property information were not deemed reasonably ascertainable by EDR. This no coverage determination reflects a search only of business directory repository collections which EDR accessed. It can not be concluded from this search that no coverage for the target property exists anywhere, in any collection.

## NO COVERAGE

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

# Appendix F
# Site Inspection Documents

**Phase I Environmental Baseline Survey, Morgan City, Tethered Aerostat Radar System, Glencoe, Louisiana (September 1994)**

Included on CD enclosed

**Final Environmental Baseline Survey for Morgan City, LA Tethered Aerostat Radar System (TARS Site) (March 2000)**

Included on CD enclosed

**Final Environmental Assessment, Tethered Aerostat Radar System (TARS Site), Morgan City, Louisiana, Environmental Audit for Downsizing to Caretaker Status (August 2001)**

Included on CD enclosed

**Environmental Assessment/Environmental Baseline Survey for the Morgan City TARS Site (April 2003)**

Included on CD enclosed

# Final Environmental Baseline Survey (EBS) for the Tethered Aerostat Radar System (TARS) Site, Morgan City, Louisiana (August 2009)

Included on CD enclosed

# Appendix G
# Threatened and Endangered Species

**Federally Threatened and Endangered Species of Louisiana**

| Common Name | Scientific Name | Status |
|---|---|---|
| Louisiana Black Bear | *Ursus americanus luteolus* | T |
| American Burying Beetle | *Nicrophorus americanus* | E |
| Eskimo Curlew | *Numenius borealis* | E |
| Mississippi Gopher Frog | *Rana capito sevosa* | E |
| Alabama Heelsplitter | *Potamilus inflatus* | T |
| Jaguar | *Panthera onca* | E |
| Pink Mucket | *Lampsilis abrupta* | E |
| Florida Panther | *Puma concolor coryi* | E |
| Louisiana Pearlshell | *Margaritifera hembeli* | T |
| Piping Plover | *Charadrius melodus* | T |
| Green Sea Turtle | *Chelonia mydas* | T |
| Hawksbill Sea Turtle | *Eretmochelys imbricate* | E |
| Kemp's Ridley Sea Turtle | *Lepidochelys kempii* | E |
| Leatherback Sea Turtle | *Dermochelys coriacea* | E |
| Loggerhead Sea Turtle | *Caretta caretta* | T |
| Gulf Sturgeon | *Acipenser oxyrinchus desotoi* | T |
| Pallid Sturgeon | *Scaphirhynchus albus* | E |
| Interior Least Tern | *Sterna antillarum* | E |
| Gopher Tortoise | *Gopherus polyphemus* | T |
| Ringed Map Turtle | *Graptemys ocumera* | T |
| Black-Capped Vireo | *Vireo atricapilla* | E |
| Finback Whale | *Balaenoptera physalus* | E |
| Humpback Whale | *Megaptera novaeangliae* | E |
| Gray Wolf | *Canis lupus* | E |
| Ivory-Billed Woodpecker | *Campephilus principalis* | E |
| Red-Cockaded Woodpecker | *Picoides borealis* | E |
| American Chaffseed | *Schwalbea americana* | E |
| -- | *Geocarpon minimum* | T |
| Pondberry | *Lindera melissifolia* | E |
| Louisiana Quillwort | *Isoetes louisianensis* | E |

*Source: U.S. Fish and Wildlife Service (December 15, 2009)*

## State Threatened and Endangered Species of Louisiana

| Common Name | Scientific Name | Status |
|---|---|---|
| American Burying Beetle | *Nicroporus americanus* | E |
| Pink Mucket | *Lampsilis abrupta* | E |
| Louisiana Pearlshell | *Margaritifera hembeli* | T |
| Fat Pocketbook | *Potamilus capax* | E |
| Inflated Heelsplitter | *Potamilus inflatus* | T |
| Gulf Sturgeon | *Acipenser oxyrhynchus desotoi* | T |
| Pallid Sturgeon | *Scaphirhynchus albus* | E |
| Mississippi Gopher Frog | *Rana sevosa* | E |
| Loggerhead Sea Turtle | *Caretta caretta* | T |
| Green Sea Turtle | *Chelonia mydas* | E/T |
| Hawksbill Turtle | *Eretmochelys imbricate* | E |
| Kemp's Ridley Sea Turtle | *Lepidochelys kempii* | E |
| Leatherback Sea Turtle | *Dermochelys coriacea* | E |
| Ringed Map Turtle | *Graptemys oculifera* | T |
| Gopher Tortoise | *Gopherus polyphemus* | T |
| Brown Pelican | *Pelecanus occidentalis* | E |
| Bald Eagle | *Haliaeetus leucocephalus* | T |
| Attwater's Greater Prairie Chicken | *Tympanuchus cupido attwateri* | E |
| Whooping Crane | *Grus americana* | E |
| Piping Plover | *Charadrius melodus* | E/T |
| Eskimo Curlew | *Numenius borealis* | E |
| Interior Least Tern | *Sterna antillarum athalassos* | E |
| Red-Cockaded Woodpecker | *Picoides borealis* | E |
| Ivory-Billed Woodpecker | *Campephilus principalis* | E |
| Bachman's Warbler | *Vermivora bachmanii* | E |
| Red Wolf | *Canis rufus* | E |
| Louisiana Black Bear | *Ursus americanus luteolus* | T |
| Florida Panther | *Puma concolor coryi* | E |
| Manatee | *Trichechus manatus* | E |
| Sperm Whale | *Balaenoptera macrocephalus* | E |
| Sei Whale | *Balaenoptera borealis* | E |
| Blue Whale | *Balaenoptera musculus* | E |
| Finback Whale | *Balaenoptera physalus* | E |
| Pearl Darter | *Percina aurora* | C |
| Black Pine Snake | *Pituophis melanoleucus lodingi* | C |
| Louisiana pine snake | *Pituophis ruthveni* | C |

*Source: Louisiana Department of Wildlife and Fisheries (2005)*

*E= Endangered*
*T= Threatened*
*C= Candidate*

**Rare, Threatened, and Endangered Species and Natural Communities of St. Mary Parish, Louisiana**

| Common Name | Scientific Name | State Rank | Global Rank | State Status | Federal Status |
|---|---|---|---|---|---|
| Golden Canna | *Canna flaccida* | S4 | G4 | | |
| Cypress-Knee Sedge | *Carex decomposita* | S3 | G3 | | |
| Floating Antler-Fern | *Ceratopteris pteridoides* | S2 | G5 | | |
| Snowy Plover | *Charadrius alexandrinus* | S1B, S2N | G4 | | PS:LT |
| Piping Plover | *Charadrius melodus* | S2N | G3 | T/E | LT, LE |
| Croomia | *Croomia pauciflora* | SH | G3 | | |
| Cypress Swamp | -- | S4 | G4G5 | | |
| Cypress-Tupelo Swamp | -- | S4 | G3G5 | | |
| Lance-Leaved Glade Fern | *Diplazium lonchophyllum* | S1 | G3G5 | | |
| Southern Shield Wood-Fern | *Dryopteris ludoviciana* | S2 | G4 | | |
| Rooted Spike-Rush | *Eleocharis radicans* | S1 | G5 | | |
| Freshwater Marsh | -- | S1S2 | G3G4 | | |
| Gull-Billed Tern | *Gelochelidon nilotica* | S2B, S2S3N | G5 | | |
| Bald Eagle | *Haliaeetus leucocephalus* | S2N, S3B | G5 | E | Delisted |
| Hardwood Slope Forest | -- | S3S4 | G2G3 | | |
| Common Water-Willow | *Justicia americana* | S2 | G5 | | |
| Live Oak Forest | -- | S1S2 | G2 | | |
| Square-Stemmed Monkey Flower | *Mimulus ringens* | S2 | G5 | | |
| Coastal Ground Cherry | *Physalis angustifolia* | S1 | G3G4 | | |
| Roseate Spoonbill | *Platalea ajaja* | S3 | G5 | | |
| Woodland Bluegrass | *Poa sylvestris* | S1 | G5 | | |
| Paddlefish | *Polyodon spathula* | S3 | G4 | Prohibited | |
| Millet Beakrush | *Rhynchospora miliacea* | S2 | G5 | | |
| Vegetated Pioneer Emerging Delta | *Sagittaria latifolia, Sagittaria platyphylla* | S2S3 | G3G4 | | |
| Salt Dome Hardwood Forest | -- | S1 | G1 | | |
| Scarlet Woodbine | *Schisandra glabra* | S3 | G3 | | |
| Texas Aster | *Symphyotrichum* | S1 | G5TNR | | |

| Common Name | Scientific Name | State Rank | Global Rank | State Status | Federal Status |
|---|---|---|---|---|---|
| | *drummondii var. texanum* | | | | |
| Willdenow's Fern | *Thelypteris interrupta* | S1 | G5 | | |
| Broad-Leaved Spiderwort | *Tradescantia subaspera* | S2 | G5 | | |
| Louisiana Black Bear | *Ursus americanus luteolus* | S2 | G5T2 | T | LT |
| Waterbird Nesting Colony | -- | SNR | GNR | | |

*Source: Louisiana Department of Wildlife and Fisheries (2005)*

***Federal Ranks***
*LE= Listed Endangered*
*LT= Listed Threatened*
*PS= Partial Status. Status in only a portion of the species' range.*

***Global Element Ranks:***
*G1: Critically imperiled globally because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extinction*
*G2: Imperiled globally because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extinction throughout its range*
*G3: Either are very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single physiographic region) or because of other factors making it vulnerable to extinction throughout its range (21 to 100 known extant populations)*
*G4: Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery (100 to 1000 known extant populations)*
*G5: Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery (1000+ known extant populations)*
*T: Subspecies or variety rank (e.g. G5T4 applies to a subspecies with a global species rank of G5, but with a subspecies rank of G4)*

***State Element Ranks:***
*S1: Critically imperiled in Louisiana because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extirpation*
*S2: Imperiled in Louisiana because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extirpation*

*S3: Rare and local throughout the state or found locally (even abundantly at some of its locations) in a restricted region of the state, or because of other factors making it vulnerable to extirpation (21 to 100 known extant populations)*

*S4: Apparently secure in Louisiana with many occurrences (100 to 1000 known extant populations)*

*SH: Of historical occurrence in Louisiana, but no recent records verified within the last 20 years; formerly part of the established biota, possibly still persisting*

*B: Breeding*

*N: Non-Breeding*

***State Protection Status:***

*E: Taking or harassment of these species is a violation of state and federal laws*

*T: Taking or harassment of these species is a violation of state and federal laws*

*T/E: Taking or harassment of these species is a violation of state and federal laws*

*Prohibited: Possession of these species is prohibited. No legal harvest or possession*

# Appendix H
# Additional Resources

DRAFT

# LEVEL I CULTURAL RESOURCES SURVEY OF 22.349 ACRES IN ST. MARY PARISH, LOUISIANA

Submitted to:

C.H. Fenstermaker and Associates, Inc.
Lafayette, Louisiana

By:

**Enviro-Archaeo**
a subsidiary of
The Reid Companies, Inc.
Lafayette, Louisiana

# LEVEL I CULTURAL RESOURCES SURVEY OF 22.349 ACRES IN ST. MARY PARISH, LOUISIANA

By:
A. Frank Servello and Carey E. Blanchard

Edited By:
Mary Ellen Servello

Illustrations By:
Paula Blanchard

15 December 1992

## TABLE OF CONTENTS

## LIST OF FIGURES

## MANAGEMENT ABSTRACT

The State of Louisiana Department of Culture, Recreation and Tourism, Division of Archaeology requested the United States Customs Service (Customs) to implement a Level I intensive cultural resources survey on 22.349 acres of land in St. Mary Parish prior to construction of a specialized facility at the location. Customs directed their planning and clearing contractor, C.H. Fenstermaker and Associates, Inc. of Lafayette, Louisiana to obtain the services necessary to address the request. Fenstermaker and Associates subsequently sub-contracted with Enviro-Archaeo, a subsidiary of The Reid Companies of Lafayette, Louisiana to perform the tasks and produce a report of findings including recommendations.

On November 29 and December 12, 1992, a team mobilized in the project area and carried out an extensive surface search and intensive subsurface investigation to locate and record any cultural resources that may be present. Background research had indicated the project area has been in cane cultivation for numerous decades, terminating only immediately prior to the survey. The locus had been cleared of all vegetation and leveled in preparation for the survey and construction.

Cultural resources were not recovered during the survey effort. Disturbance from cultivation activity was found to extend to between 70cm and 80cm below surface. Although the uppermost 20cm of matrix consisted of loosely consolidated very fine to fine silty sands, the lower sediments were found to be poorly drained silt loams typical of backslope levee deposits. This factor is believed to have effected suitability of the locus for habitation. Since cultural resources were not found at the locus, it is recommended that clearance be granted by the Division of Archaeology and the planned action be permitted to proceed as scheduled.

# CHAPTER ONE
# PROJECT REVIEW

## Introduction

The United States Customs Service proposes the construction of a facility in St. Mary Parish, Louisiana (Figure 1). The U. S. Customs Service subsequently contracted with C.H. Fenstermaker & Associates, Inc. to acquire the necessary permits and clearance to proceed with the proposed project.

The Louisiana Department of Culture, Recreation and Tourism, Division of Archaeology, requested that the United States Customs Service determine whether the construction of the proposed facility would have any potential impact on historic properties located within the proposed project area. Mandated by federal and state regulations governing the identification and disposition of cultural resources properties, the Division of Archaeology subsequently requested that a Level I cultural resources investigation be conducted within the proposed project area.

In November of 1992, C.H. Fenstermaker & Associates, Inc. contracted with Enviro–Archaeo, a subsidiary of the Reid Companies, Inc., to conduct the cultural resources investigation. In addition to conforming to the procedures and guidelines listed in the Cultural Resources Code of Louisiana, Enviro–Archaeo contacted Mr. Philip Rivet with the Division of Archaeology for any recommendations he might deem necessary to expedite the process.

## Project Setting

The cultural resources investigation under consideration in this report included an evaluation of cultural resources within the proposed project area, which covers a 23 acre

sugarcane field east of the community of Kemper, Louisiana. The project area is located immediately adjacent to the Southern Pacific Railroad in Sections 27 and 28, Township 14 South, Range 8 East on the U.S.G.S. 1963 Kemper, Louisiana 7.5' series quadrangle.

The project area is situated on the natural levee of Bayou Cypremort. The terrain was uniformly flat with soil characteristics that included silty loam, clay and sandy loam of the Cypremort–Iberia–Jeanerette Association. The nearest known site to the project area is 16SMy74 (Figure 2).

## Project Summary

In November 1992, Enviro–Archaeo conducted a cultural resources investigation in the project area of the proposed U.S. Customs Service facility in St. Mary Parish, Louisiana. The evaluation of the field investigation is discussed in the following report. Chapter Two is a cultural overview of the project area. Chapter Three presents the research design and discusses the field and laboratory methodologies employed by the investigation. Chapter Four is a discussion of the investigative results and Chapter Five provides the conclusions and recommendations of the project.

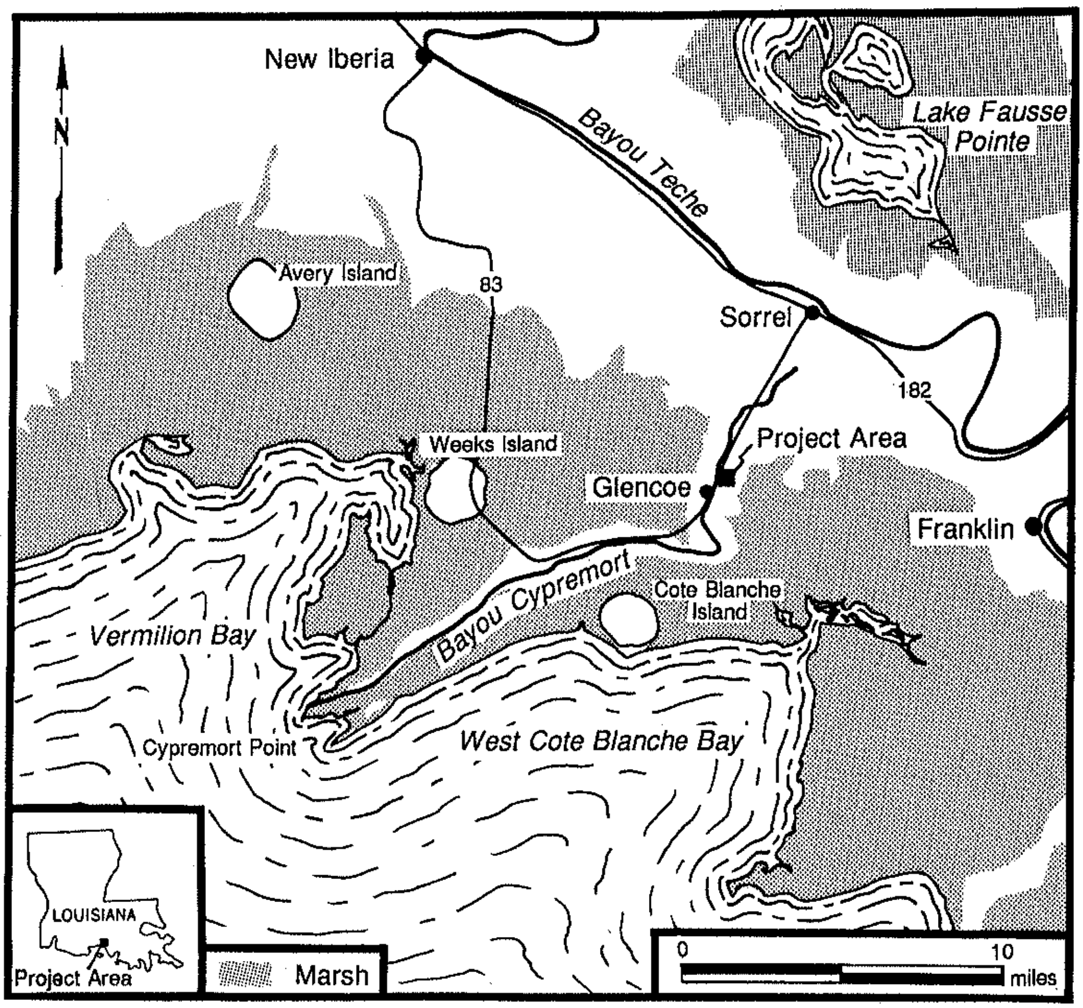


**Figure 1. Vicinity map of project area.**

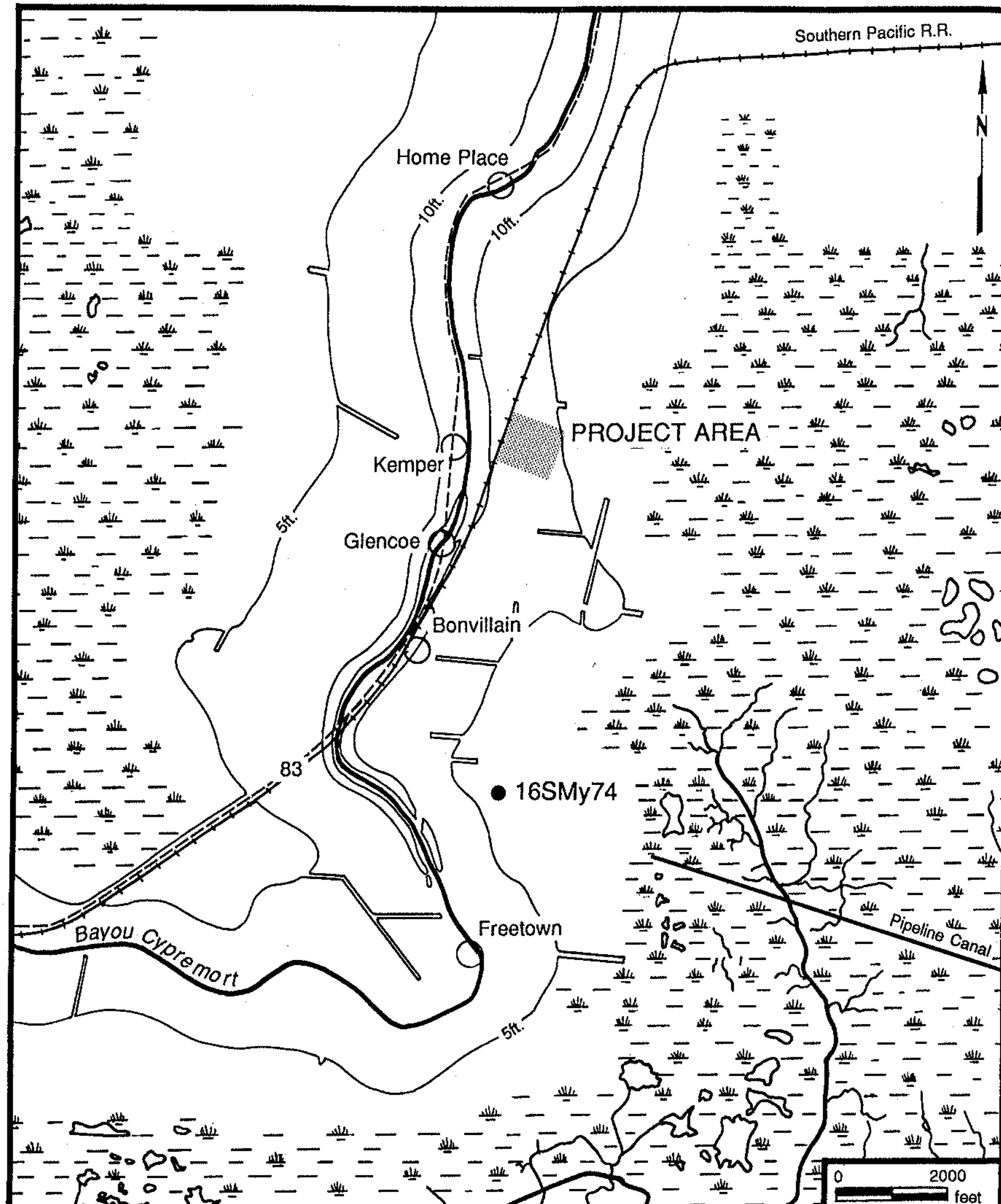


**Figure 2. Project area map.**

## CHAPTER TWO
## CULTURAL OVERVIEW

### Introduction

The project area is located within the cultural province of the Lower Mississippi Alluvial Valley. Management Unit III of the Louisiana Comprehensive Archaeological Plan (CAP) has identified 17 basic avenues of archaeological research to be addressed in studying the cultural manifestations found within the general region *(Smith et al. 1983).* Four principal research themes were considered to represent the cultural characteristics directly related to the project area. These included: 1) the prehistoric adaptation to the changing deltas; 2) prehistoric coastal subsistence and settlement patterns; 3) ethnic enclaves of Blacks, Acadians, Germans and other immigrants; and, 4) plantation archaeology. While few archaeological investigations have been conducted in the project area, several major investigations within the general region have made contributions to defining the areas cultural historical framework.

### Previous Investigations

The earliest description of prehistoric archaeological sites within the general region was recorded by James Cathcart. Commissioned by the U.S. Navy in 1819 to appraise timber resources in the Lower Atchafalaya Basin, Cathcart observed an Indian burial ground at Morgan City, Louisiana and four Indian mounds in Berwick, Louisiana *(Cathcart 1819; Gibson 1978).* The earliest archaeological survey in the area was conducted by Clarence B. Moore in 1913 who recorded a historic Chitimacha village at Charenton Beach while on a brief reconnaissance of the Atchafalaya River and Bayou Teche *(Moore 1913; Goodwin & Assoc. 1990).*

During the 1930s Fred B. Kniffen and James Ford contributed to the development of a regional sequence through the correlation of physiographic features with artifactual remains and by defining the culture chronology of the state *(Goodwin & Assoc. 1990).* In the 1950s William G. McIntire continued to expand the research base of the region through his interest in defining the settlement patterns of prehistoric occupations throughout the lower alluvial valley. In his 1958 report, McIntire described two sites located near the project area. The first is Bayou Bartholomew (16SMy42) near Mud Lake and the second is the Morton Shell Mound site(16Ib3) on Weeks Island *(McIntire 1958).*

Archaeological investigations continued in the general vicinity of the project area during the 1960s and 1970s. Sherwood M. Gagliano focused on Avery Island and reported on excavations at Banana Bayou Mound (16Ib24) and the Salt Mine Valley site (16Ib23) which indicated the presence of two early stone tool technologies *(Gagliano 1964, 1967).* Additionally, Robert Neuman reported on investigations at the Morton Shell Mound *(Neuman 1972).* In 1976, Robert Neuman and A. Frank Servello reported on a survey of the Atchafalaya Basin and in that same year, Jon Gibson conducted a survey of the Bayou Teche *(Neuman and Servello 1976; Gibson 1976).* Also during the 1970s, the Peabody Museum sponsored the Lower Mississippi Survey Petite Anse Project which contributed to a regional chronology for the Five Island area in Iberia and St. Mary parishes *(Brown 1977–1980).*

The 1980s produced several reports from the general vicinity surrounding the project area. Archaeological investigations were conducted along Bayou Teche *(Goodwin and Assoc. 1985)* and at Avery Island (*Orser 1987; Babson 1989)* and a testing program was more recently undertaken along the Trunkline Gas Company Bayou Sale pipeline in Vermilion, Iberia and St. Mary parishes *(Goodwin and Assoc.1990).*

## Prehistoric Sequence

### Paleo–Indian

Paleo–Indian cultural manifestations are thought to have been present in Louisiana as early as 10,000 to 8,000 BC *(Gagliano 1967).* This cultural period is classified almost exclusively through the use of lithic technologies such as large lanceolate fluted points and unifacially or bifacially flaked scrapers recovered in surface collections. Only four Paleo–Indian sites are recognized in Management Unit III *(Smith et al. 1983)*

### Archaic

Archaic cultural manifestations introduced during this period included more specialized lithic technologies as subsistence strategies shifted to accomodate an expanded demographic base. Projectile points progressed from notched to beveled varieties. Polished stone, bone and shell tools, the use of the atlatl and a late Archaic riverine occupancy based on a shellfish economy, developed during this period. Forty

sites from this period are recorded in Management Unit III; however, most of these remain poorly defined *(Smith et al. 1983).*

### Formative

The transitional period between the preceramic and the ceramic cultural traditions on the Gulf Coastal Plain has been defined in recent literature as the Gulf Formational or Formative *(Walthall and Jenkins 1976; Servello et al. 1992).* Cultural manifestations exhibited in this period include the establishment of a trade network for the acquisition of steatite vessels, the introduction of fiber-tempered pottery, the exploitation of delta environments, the development of a social organization elaborate enough to build one of the earliest mound complexes and the continued reliance on a subsistence economy. The Poverty Point culture exhibited these traits in Louisiana and some recent investigations have included the Tchefuncte culture in this period, as well *(Servello et al. 1992).* A total of 52 sites from these cultures are recorded in Management Unit III *(Smith et al. 1983).*

### Woodland

The widespread use of ceramics with a progression of different tempering agents and designs are the dominate cultural manifestations associated with this period. Influenced by the diffusion of Hopewellian cultural traits such as the construction of conical mounds and the creation of ceremonial artifacts, the Woodland period in Louisiana exhibited strong regional variations. These include the Marksville and Troyville–Coles Creek cultures which are the most widespread archaeological manifestations within Management Unit III *(Smith et al.1983).*

### Mississippian

The introduction of elaborately decorated shell–tempered ceramics, platform mounds, a stratified social organization and agriculture mark the cultural manifestations of this period. Within the general vicinity of the project area, the indigenous Plaquemine culture was not influenced until late in the period with the introduction of shell–tempered ceramics decorated with Southern Cult motifs. Sites from this period are predominantly distributed over the southeastern portion of the state and 17 Mississippian sites, as well as 83 Plaquemine sites have been recorded in Management Unit III *(Smith et al. 1983).*

## Protohistoric

The Chitimacha and the Attakapas are the earliest recorded Native Americans to occupy the general region surrounding the project area. The Chitimacha were reported living along Bayou Lafourche when the French made contact. They were driven to the west by the French in 1706 and resettled in several villages along Bayou Teche near Charenton Beach *(Yakubik et al. 1985).* The Attakapas inhabited southwestern Louisiana from Bayou Teche to Texas. European settlement initially encroached upon and

eventually dispersed these historic tribes. Eight sites are reported for this period in Management Unit III of the CAP *(Smith et al. 1983).*

**Historic**

European contact in the project area was initiated through the exploration and colonization efforts of the French. While the French colonial period did not see any significant settlement in the area, the Spanish acquisition of Louisiana in 1763 brought an influx of Acadians and Blacks into the region. During the Antebellum period, Joseph Sorrel established a sugarcane plantation in 1811 on 600 arpents along Bayou Cypremort within the project area. While no specific records exist concerning this plantation, several recent studies have discussed the historic period of the project area *(Gibson 1979; Goodwin & Assoc. 1990).*

## CHAPTER THREE
## RESEARCH DESIGN AND METHODOLOGIES

### Research Design

The primary objective of this project is to determine whether *in situ* subsurface cultural deposits are present in the project area, specifically in the area of the proposed U.S. Customs Service facility planned for the location. Additional objectives include determining the general horizontal and vertical extent of any cultural deposits, as well as to establish the chronological placement and nature of the activities undertaken by the occupants. The relationship of any prehistoric occupation and/or evidence of a historic occupation or refuse deposition to cultural developments in the area would play a primary role in the evaluation of identified resources.

Four principal Louisiana CAP research themes will additionally be addressed that are directly related to the portion of Management Unit III containing the project area. These are: 1) prehistoric adaptation to the changing deltas; 2) prehistoric coastal subsistence and settlement patterns; 3) ethnic enclaves – Blacks, Acadians, Germans, and other immigrants; and, 4) plantation archaeology. These themes are considered to be of primary importance in filling gaps in the culture historic development of the area. An intensive field program and laboratory methodology were subsequently adopted to address these concerns.

### Field Methodology

Field investigation is designed to proceed in two basic stages. The initial stage will be to locate the project vicinity and establish the boundaries of the project area. A pedestrian survey for systematic surface collection will also be undertaken during this investigative stage. Observations on surface conditions and topographic setting will be

made, as well. The second stage will be to develop a grid and systematically excavate 50cm by 50cm site location units across the project locus. All matrix will be taken out in 10cm arbitrary levels and sieved through 1/4 inch mesh screen.

The intensiveness of the subsurface investigation, (i.e., number of units), will be based on the conditions of the site area and the recovery of cultural materials. Should the matrix be completely churned due to long term cultivation, with no evident cultural material or with disturbed cultural deposits, a minimum number of units will be required. Should relevant cultural deposits be encountered in the initial series of units, investigations will be expanded to include a unit in every southwestern corner of a 20 meter grid, with excavations continuing until horizontal delineation of the cultural deposits is completed.

All cultural material recovered will be bagged by provenience. Photographic coverage of the field procedures will be maintained. Observations on the sedimentological conditions at the locus will be undertaken during subsurface investigations and a daily log of the investigations will be maintained by the project director.

## Laboratory Procedures

Artifactual materials will be washed, stabilized and catalogued following the guidelines adopted in the State of Louisiana Cultural Resources Code. They will be sorted into major categories, such as prehistoric ceramics and historic materials, for further analyses. The approach and procedures to be utilized in the analysis of each category are described below.

### Prehistoric Ceramics

The principal considerations in the prehistoric ceramic analysis is with the technological processes of production. The techniques identified will be compared to collections from other sites in the project area and in Management Unit III of the CAP. Observations would include tempering agents, surface treatment and mode of application. Vessel shapes and number of vessels represented are also considered viable avenues of research.

### Prehistoric Lithics

Any prehistoric lithic materials recovered will initially be divided into two primary categories, chipped stone and ground stone. All chipped stone recovered will be analyzed using a hand lens, while surfaces of ground stone artifacts will be examined microscopically using a Wolf binocular microscope at 30 to 60 power. All chipped stone and ground stone tools will be separated from the general inventory to minimize edge or surface damage.

All chipped stone will be sorted into tools (secondarily modified pieces) and non–tools. All tools will subsequently be placed into various classes based upon morphological shape of the piece or the working edge, which include projectile points, heavy bifaces, scrapers, perforators, denticulates, scaled pieces, lightly retouched pieces, among others. Non–tools will be further subdivided into debitage and debris. Standard debitage categories include primary flakes, secondary flakes, tertiary flakes, blades, biface thinning flakes and chunks. Debris includes chips, biface thinning chips, spalls and small chunks. Definition of these various artifact forms may be found elsewhere *(Servello and Hays 1991; Servello 1983; Brassieur 1983).* All ground stone will be categorized into utilitarian pieces, such as grinding slabs and manos, or non–utilitarian and ornamental pieces, such as ochre (pigment), plummets and pendants.

### Historic Artifacts

All historic materials recovered will first be classified by artifact and material categories, (e.g., glass, ceramic, metal). Standard typological classification will subsequently be utilized for each category. For example, ceramics will be subclassified into decorated and undecorated pieces and then subsequently into types, while unidentified glass fragments would be classified by rough or smooth surface texture and color. An evaluation of any historic inventory will be based upon the presence of chronological indicators, condition of the artifacts and nature of the inventory composition.

### Other Materials

Due to the moist nature of the sediments in the project area and the ground water level, the potential for faunal remains and bone artifacts is moderately high. If recovered, these materials will be cleaned and stabilized immediately. All faunal samples will be analyzed by family, genera and species, if possible.

## CHAPTER FOUR
## INVESTIGATIVE RESULTS

### Topographic Setting

The project area is situated in the backslope of Bayou Cypremort at elevations that range between 2.1m and 1.6m amsl, and within 155 meters west of the coastal marsh. The setting owes its genesis to the Teche-Mississippi deltaic plain, which dates between 5800 to 3500 years ago *(Frazier 1967)* or the late Middle Holocene. A more reasonable date may be between 2800 and 2000 years ago based upon the incidence of Formative cultural manifestations (Tchefuncte) with these surfaces and sediments within Management Units II and III.

### Field Investigations

Prior to initiation of the survey, the locus was visited in September 1992 and subjected to a cusory study to determine the potential impact of current and recent historic land use practices. The locus and surrounding terrain were being used to grow sugar cane, the principal cash crop of the area. In a discussion with Mr William Terry, the current lease holder, it was decided that prior to survey the cane would be allowed to mature and the field cleared of debris from the current harvest. As was noted earlier, the local area has been in sugar cane cultivation for more than 100 years (see Chapter Two).

The locus was subjected to the intensive survey program on 29 November and 12 December 1992. To the north, south and east, the terrain retains the deep furrows and elevated rows typical of cane fields in poorly drained soils. Modern implements are used to churn and rake the sediments to between 65 and 85cm below surface every 3 to 5 years prior to stacking the sediments into rows and planting new cane. By contrast, the

project locus had been cleared in late October 1992 and left unfurrowed/unrowed in preparation for survey and eventual construction of the proposed facility. However, as a result of recent rain, the most recent furrows were evident as poorly drained matrix approximately 60cm in width separated by more firm sediments of similar width. Thus, from center furrow to center furrow is around 120cm. In addition, a drainage ditch some 80cm or more in depth is present on the southern periphery, while a second, partially filled one, bisects the locus west to east along the 70 meter north grid line. A larger drainage ditch, some four meters wide and two meters deep, borders the eastern perimeter of the property. The 22.349 acre survey locus is a parallelogram shaped unit with sides measuring 304.8 meters (1000 feet). In addition, the unit is slightly inclined (27.5 degrees) off cardinal axes.

Following the establishment of a 20 meter grid, the initial phase of investigation was to perform an extensive surface collecting effort in 10 meter transects across the entire surface of the locus. With the exception of a few highly scattered fragments of modern metal farm equipment parts, cement chunks and brick(?) fragments, the surface search produced no evidence of either a prehistoric occupation or of any historic habitation/trash midden activity.

Five 50cm by 50cm shovel test units were excavated south to north generally along the 60 meter east grid line. The units were placed on row remnants and were excavated to an average of 80cm below surface. Cultural material was not recovered. The silt loam matrix became increasingly compacted below 60cm, although disturbance extended to between 70 and 80cmbs.

The top 20 to 30cm consisted of a consolidated fine sandy silt with a 10YR3/3 dark brown color matrix and faint 10YR6/6 brownish yellow mottles. This sediment shares characteristics with the moderately well drained Cypremort soils typically found along the levee crest of Bayou Cypremort. It conformably overlays a horizon of compacted silt loam to between 70 and 80cmbs with a 10YR2/1 black color when wet and after drying exhibited large 10YR6/4 yellowish brown mottling. A zone of tightly compacted silt loam with a 10YR3/2 very dark grayish brown to 10YR2/3 very dark brown color was encountered between 75 and 80cmbs. This horizon appeared to be undisturbed, but was culturally sterile. The lower two zones share common traits and are typical of the poorly drained Iberia Soil Series located in the levee backslopes along Bayou Cypremort.

## CHAPTER FIVE
## CONCLUSIONS AND RECOMMENDATIONS

An intensive Level I survey of the proposed United States Customs Service facility in St. Mary Parish was undertaken between 29 November and 12 December 1992. Although the sediment matrix has been repeatedly churned for sugar cane cultivation to depths below 70cm, no relevant cultural material was observed on the denuded surface. In addition, the surface of the adjoining property was extensively searched for cultural debris and none was encountered.

Five 50cm by 50cm shovel test units placed in the project area failed to return cultural material. The uppermost 20cm to 25cm consisted of fine sandy loams typical of Cypremort soils. However, the lower matrix consists of compacted silt loam (Iberia soils) typical of Bayou Cypremort levee backslopes (batcher). The poor permeability of these lower sediments makes them less desirable for either prehistoric or historic habitation. This condition is believed to be the principal reason why cultural materials are absent in the project area.

As a consequence of the negative findings for cultural resource occurrences, it is recommended that the project area be released for the proposed development. No further cultural resources investigations are deemed necessary.

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# Soil Survey of St. Mary Parish, Louisiana

Included on CD enclosed

**Female with cubs** **photo: Paul Davidson**

# Bear Facts

The Louisiana black bear is on of 16 recognized subspecies of black bears in North America.

## Range/Habitat/Population

- The American black bear, *Ursus americanus*, was once found throughout North America from Alaska and northern Canada south to northern Mexico.

- Those bears found in Louisiana, the lower two thirds of Mississippi and in eastern Texas are considered to belong to the subspecies *Ursus americanus luteolus*, the Louisiana black bear.

- Historic accounts refer to Louisiana black bears as common throughout the region, with the greatest densities in the expansive bottomland hardwood forests associated with river basins in the lower Mississippi River Valley.

- By the mid-twentieth century only a few individuals remained along the Mississippi and lower Atchafalaya rivers in eastern Louisiana and possibly neighboring Mississippi.

- Today black bears are found in core areas in the Tensas and Atchafalaya River basins in Louisiana, with small-scattered populations in southeast Louisiana and western Mississippi.

- Remaining populations of black bears in Louisiana exist primarily in bottomland hardwood and floodplain forests, although the use of other habitat does occur. Essential black bear habitat components include food, water, cover, denning sites, and limited human access.

- Biologists estimate the current population to have between 300 and 400 individuals.

## Appearance

- Black bears in the region are normally black with a brown muzzle and an occasional white blaze on the chest.

- Average weights are 150 to 350 pounds for adult males and 120 to 250 lb for adult females.

## Reproduction

- Female black bears begin having cubs at three to five years of age.

- Mating generally occurs in the summer months but egg implantation is typically delayed for five months. Litter sizes ranging between one to five cubs are born in winter dens in January and February. There are approximately equal numbers of males and females in each litter.

photo: Paul Davidson

- Mother and cubs leave the den in April or May when the young weigh from four to eight pounds. Cubs stay with their mother throughout their first year. After spending their first winter in a den shared with their mother and siblings, cubs emerge in the spring and live with their mother until the family unit dissolves that summer. Immediately following the departure of her cubs, the female immediately goes back into estrus, breeds, and repeats the cycle.

## Habits

- Black bears are not true hibernators. They go through a winter dormancy period termed "carnivorean lethargy." This helps them to survive food shortages and severe winter weather.

- During their winter "sleep" bears do not eat, drink, urinate, or defecate. Waste products are recycled through unique metabolic and physiological processes. Most black bears can be aroused from lethargy if disturbed.

- Male black bears roam across large distances, often covering two to eight times the area of females. Home ranges for males may increase during the mating season. Most bears move extensively in the fall while foraging to store winter fat reserves.

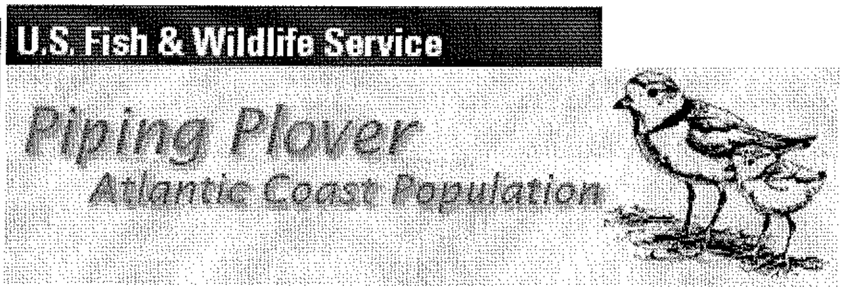
- A study done in the Tensas River Basin (U. S. Fish and Wildlife Service & University at Tennessee) indicates that adult males utilize approximately 40,000 acres and adult females 18,000 acres.

**Slough with den trees** photo: Paul Davidson

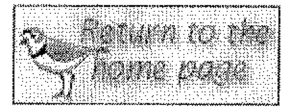
## Diet

- Although classified as carnivores, black bears are not active predators and are better described as opportunistic feeders, eating almost anything that is available.

- Louisiana black bear diet includes hard mast (acorns, pecans), agricultural crops, dewberries, blackberries, wild grapes, other fruited vines, elderberry, persimmon, pokeweed, thistle, and palmetto.

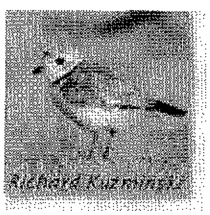



# Overview




The following information is from the brochure *You Can Help Protect the Piping Plover*, U.S. Fish and Wildlife Service Northeast Region, January 1994. Updated 2007. Click on photographs for enlarged versions.

## Description



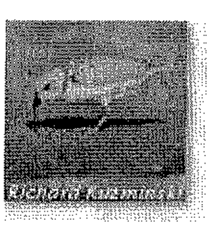

The piping plover is a small, stocky, sandy-colored bird resembling a sandpiper. The adult has yellow-orange legs, a black band across the forehead from eye to eye, and a black ring around the base of its neck. Like other plovers, it runs in short starts and stops. When still, the piping plover blends into the pale background of open, sandy habitat on outer beaches where it feeds and nests. The bird's name derives from its call notes, plaintive bell-like whistles which are often heard before the birds are seen.

## Distribution and Abundance Along the Atlantic Coast

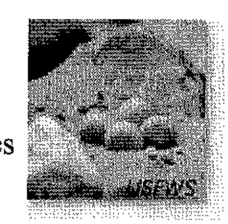
The piping plover breeds on coastal beaches from Newfoundland and southeastern Quebec to North Carolina. These birds winter primarily on the Atlantic Coast from North Carolina to Florida, although some migrate to the Bahamas and West Indies.

Piping plovers were common along the Atlantic Coast during much of the 19th century, but nearly disappeared due to excessive hunting for the millinery trade. Following passage of the Migratory Bird Treaty Act in 1918, numbers recovered to a 20th Century peak which occurred during the 1940s. The current population decline is attributed to increased development and recreational use of beaches since the end of World War II. The most recent surveys place the Atlantic population at less than 1800 pairs.

## Breeding and Feeding Habits




Piping plovers return to their breeding grounds in late March or early April. Following establishment of nesting territories and courtship rituals, the pair forms a depression in the sand somewhere on the high beach close to the dunes. The nest is sometimes lined with small stones or fragments of shell.



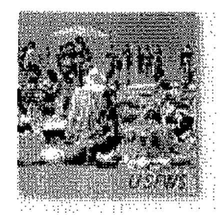

The four eggs hatch in about 25 days, and the downy young are soon

able to follow their parents in foraging for the marine worms, crustaceans, and insects that they pluck from the sand. Both the eggs and young are so well camouflaged that they are apt to go undetected unless stepped on. When predators or intruders come close, the young squat motionless on the sand while the parents attempt to attract the attention of the intruders to themselves, often by feigning a broken wing.

Surviving young fledge and are flying in about 30 days. However, stormtides, predators, or intruding humans sometimes disrupt nests before the eggs hatch. When this happens, the plovers often renest in the vicinity and young hatched from these late nesting efforts may not be flying until late August. Plovers often gather in groups on undisturbed beaches prior to their southward migration. By mid-September, both adult and young plovers will have departed for their wintering areas.

## Threats

Several factors are contributing to the decline of the piping plover along the Atlantic Coast.



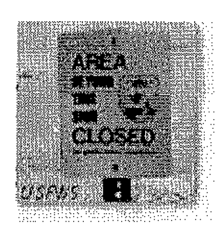

- Commercial, residential, and recreational development have decreased the amount of coastal habitat available for piping plovers to nest and feed.
- Human disturbance often curtails breeding success. Foot and vehicular traffic may crush nests or young. Excessive disturbance may cause the parents to desert the nest, exposing eggs or chicks to the summer sun and predators. Interruption of feeding may stress juvenile birds during critical periods in their development.
- Pets, especially dogs, may harass the birds.
- Developments near beaches provide food that attracts increased numbers of predators such as raccoons, skunks, and foxes. Domestic and feral cats are also very efficient predators of plover eggs and chicks.
- Stormtides may inundate nests.


## Protection Under the Endangered Species Act

The piping plover became a protected species under the Endangered Species Act on January 10, 1986. Along the Atlantic Coast it is designated as threatened, which means that the population would continue to decline if not protected. The Endangered Species Act provides penalties for taking, harassing or harming the piping plover and affords some protection to its habitat.

Other rare species that inhabit the beach ecosystem, including the Federally endangered roseate tern, the threatened northeastern beach tiger beetle, the threatened seabeach amaranth, the least tern, the common tern, the black skimmer, and the Wilson's plover, may benefit from piping plover protection efforts.

## Things You Can Do to Help Protect the Piping Plover




- Respect all areas fenced or posted for protection of wildlife.
- Do not approach or linger near piping plovers or their nests.
- If pets are permitted on beaches used by plovers, keep your pets leashed. Keep cats indoors.
- Don't leave or bury trash or food scraps on beaches. Garbage attracts predators which may prey upon piping plover eggs or chicks.

## For Further Information

For further information, contact:
Office of Endangered Species
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, Massachusetts 01035-9589

or contact your State Natural Resource Agency.

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Last updated October 2, 2002

# Erosion Control BMPs

One of the pollutants contributing to storm water pollution that most people are unaware of is sediment. Sediment contains nitrogen, phosphorous and possibly other contaminants. When rain carries sediment into local streams, nitrogen and phosphorous trigger algae growth, which reduces water clarity, depletes oxygen, creates odors and leads to fish kills. Just the mere presence of extra sediment in streams and other water bodies increases turbidity (cloudiness) which reduces photosynthesis and food production. Sediment deposition also destroys fish habitat and spawning areas.

The main goal is to prevent erosion before it happens. Erosion control is typically 90-98% effective. Erosion control measures should be supplemented with sediment control measures in case erosion does occur. All new development and redevelopment projects that could possibly cause sediment runoff from disturbed areas into the storm drain system or watercourse should consider the use of the following Best Management Practices:

- **Scheduling** will reduce the amount of soil exposed and the duration of its exposure to wind, rain, and vehicle tracking.
  - Scheduling:
    - Incorporates the use of a schedule or flow chart to layout the construction plan.
    - Works out the sequencing and time frame for the initiation and completion of tasks such as site clearing, grading, excavation, pouring foundations, installing utilities, etc.
    - Incorporates erosion and sediment control BMPs.
    - Minimizes land disturbing activities scheduled between October and April. Extra BMPs should be implemented during these months to protect the site from erosion.
    - Should avoid major grading operations between October and April.
    - Should allow enough time before rainfall begins to stabilize soil with vegetation or physical means (i.e. installing temporary sediment trapping devices).
  - *Limitation:*
    - None

- **Erosion Control Blankets** decrease soil compaction, protect disturbed soil from rain impact, increase water infiltration, protect seeds from runoff and moderate soil temperature to enhance vegetation growth.
  - *Application:*
    - Erosion control blankets or geotextiles should be used on slopes steeper than 3:1 and where the erosion hazard is high
    - Make sure that the blanket or textile is properly anchored.
    - They definitely should be used on slopes adjacent to sensitive areas such as streams, wetlands or other bodies of water.
    - The blankets or geotextiles should be used in disturbed areas where the plants are slow to develop.

        - All blankets and geotextiles should be periodically inspected throughout the course of construction.
        - They should be inspected after heavy rain events for erosion and undermining.  Any failures should be repaired immediately.
        - If a washout or breakage occurs, repair damage to the slope and then re-anchor or re-install.
        - The benefit of erosion control blankets as opposed to hydraulic seeding or mulch is that they're effective immediately.
    - *Limitation:*
        - They're usually more expensive than other erosion control measures because of high material and labor costs.

- **Hydro-mulching/Hydroseeding** is a planting technique that employs a wet slurry of seed, mulch fiber, fertilizer, and water allowing for rapid plant growth on disturbed areas.
    - *Application:*
        - Mulch is mixed in a tank along with water, seed, and fertilizer.
        - When sprayed on the ground or on a slope, a continuous blanket will form that will hold seeds in place and retain soil moisture.
        - On steep slopes and slopes susceptible to wind, the mulch should by hydraulically applied or straw mulch should be appropriately anchored.
        - To prevent displacement by wind, hydraulic fiber mulches and/or tackifying agents are useful.
        - When applying, make sure the coverage is consistent.  All areas should look the same.
        - Different types of mulches include: vegetable fibers, wood bark chips, hydraulic mulches from recycled paper, hydraulic mulches from wood fiber and hydraulic bonded fiber matrices.
    - *Limitation:*
        - Hydraulic mulches and seeding take 24 to 48 hours before they're effective as erosion control measures.

- **Fiber Rolls** are composed of biodegradable fibers stuffed into a photo-degradable open weave netting.  They allow water to pass through the fibers and trap suspended sediment, increase filtration rates, slow runoff and reduce erosion.
    - *Application:*
        - Fiber rolls can be used along the face of exposed slopes to shorten slope length and decrease flow velocity.
        - They are very useful at grade breaks where slopes transition to a steeper slope.
        - They also can be used along stream banks to assist stabilization and in drainage swales to slow flows.
        - They should follow the contour lines of the slope and be overlapped.
        - Any split, torn, unraveled or slumping fiber rolls should be repaired or replaced.
        - During prolonged rainfall, they should be inspected daily and repaired when necessary.

        - In most cases, fiber rolls do not need to be removed and can be abandoned in place.
        - If they are not excessively soiled after landscaping is in place, they can be removed and reused.
    - *Limitation:*
        - Fiber rolls are not effective for high surface flows or long and steep slopes.
        - Their primary purpose is not sediment control, although they do provide some sediment removal.
        - They should be used along with other sediment control measures.

- **Slope Grading** reduces erosion potential by decreasing runoff velocities, trapping sediment, and allowing an increase in water infiltration into the soil.
    - *Application:*
        - In order to facilitate the long-term stabilization of vegetation, all construction slopes should have the surface roughened, stair-step graded or terraced.
        - Surface roughening will benefit seeding, planting and mulching.
        - Stair step grading is applicable to gradual slopes of non-sandy soils.
        - Any sort of terracing is usually permanent. Therefore, terracing should be designed based on the site conditions and approved by a registered engineer.
    - *Limitation:*
        - Roughening may increase costs and result in sloughing with certain soil types.
        - Relying solely on roughening for temporary erosion control can result in limited effectiveness during intense rain events. Therefore, roughening should be used in conjunction with other erosion control measures such as seeding and mulching.
        - For sandy soils or very shallow or steep slopes, stair-step grading may not be practical.

- **Construction Site Entrance/Exit** should be stabilized to reduce the tracking of mud onto public roads by construction vehicles.
    - *Application:*
        - Stabilized construction site access should be created for any sites where mud or dirt can be tracked onto public roads, where dust can be problematic during dry weather and on sites adjacent water bodies.
        - A stabilized construction entrance is a pad of aggregate underlain with filter cloth.
        - The purpose is to reduce or eliminate sediment being tracked onto public roadways by construction vehicles.
        - They are moderately effective in removing sediment from vehicles leaving a construction site.

        - If sediment is still being tracked onto public roadways after the entrance has been stabilized, a tire wash should be considered. A tire wash is ditch filled with aggregate and underlain with a fiber cloth.
        - A drainage ditch needs to be built to convey water from the tire wash to a sediment trapping area.
        - A hose with an automatic shutoff nozzle should be used to wash off tires.
    - *Limitation:*
        - A stabilized entrance requires periodic top dressing of additional stones.
        - They can be expensive especially when used in conjunction with a tire wash because a sediment trap of some kind must be provided to collect runoff.
        - Another limitation of a tire wash is that a doublewide access is required to avoid having non-construction vehicles driving through the tire wash.

- **Water Conservation Practices** on construction sites reduces the potential for erosion and the transport of pollutants off site.
    - *Application:*
        - All water equipment should be kept in good working condition.
        - All water equipment should be inspected at least twice weekly. Repair all water leaks immediately.
        - Irrigation controllers need to be reset according to seasonal needs. Avoid using water to clean construction areas.
        - Sweep paved areas whenever practical.
        - All construction water runoff should be directed to areas where it can be soaked into the ground.
        - When washing vehicles and equipment, a commercial washing facility should be used whenever possible.
        - Washing of equipment on the construction site should be discouraged. If vehicle and equipment washing is done on site, minimize water use, retain all runoff on-site and do not use soaps or chemicals.
    - *Limitation:*
        - None

- **Landscape Management** can reduce erosion, decrease sediment runoff, and prevent pollution. The proper use of soil, materials, and chemicals used in landscaping can decrease the discharge of pollutants and sediment into the storm drains and waterways.
    - *Application:*
        - Native, non-invasive, drought tolerant, and pest tolerant vegetation should be used whenever possible.
        - Minimize the use of chemicals by purchasing less toxic alternatives and using only the minimum amount necessary.
        - Landscaping materials should be stored under tarps to protect them from wind and rain.
        - All landscape related grading and excavation should be scheduled for dry weather.

- All areas being revegetated should be inspected for establishment of new vegetation and replanted when necessary.
- Check dams or ditches should be sued to divert runoff away from storm drains.
- Storm drains inlets should be protected with sediment control measures.

  - *Limitation:*
    - Native, non-invasive, drought tolerant, and pest tolerant vegetation may not be readily available from suppliers.

- **Preservation of Existing Vegetation** serves as an effective form of erosion and sediment control.
  - *Application:*
    - Before any project begins, efforts should be made to preserve existing vegetation.
    - Clearly mark areas not to be disturbed with construction fencing at all times.
    - All contractors on site should be notified where these areas are.
    - Any damage to these areas must be repaired in accordance with the landscaping plan.
  - *Limitation:*
    - Protecting existing vegetation requires planning and may restrict the area available for construction activities.

**JAMES P. EVANS, III**
**P.O. Box 325**
**15670 Highway 182 West**
**Franklin, Louisiana 70538**

**337-828-1955**

**June 28, 2010**

Ms Gloria A. Hagge Project Manager
Environmental Express Services, Inc.
5944 FM 1863
Bulverde, Texas 78163

RE: Soil Analysis for the TARS Site located in St. Mary Parish, Louisiana

Dear Ms Hagge:

Enclosed are the pre-construction soil analysis and cover letter for the analysis.

If you have any questions or need additional data, please do not hesitate to contact me.

Yours truly,

James P. Evans, III

JPE,III:hvs

# CALVIN VIATOR—AGRICULTURAL CONSULTANT

J. C. Patrick, M.S.
Associate
Phone: 504-292-4050

CALVIN VIATOR, PH D.
222 RIENZI AVENUE
THIBODAUX, LOUISIANA 70301
PHONE 504-447-3393

PAUL TEMPLET, M.S.
ASSOCIATE
PHONE 504-447-4327

January 7, 1993

Will Terry
Wilson Terry Farms
4607 La. 83
Franklin, LA 70538

Dear Will:

Attached you will find the soil analysis results from the three soil samples taken from the proposed blimp site to be located on property which you farm.

These samples should serve as a baseline should the site be returned for use as an agricultural production unit. The parameters of special interest to crop production are the percent organic matter, soil pH, the cation exchange capacity (CEC) and sodium-soluble salt levels.

I would suggest Bermuda grass as a ground cover after the blimp station is established. The Bermuda could be effectively removed prior to agricultural production by applying three (3) applications of the herbicide - Roundup at the rate of 2 qts/Ac. for each application at four (4) week intervals.

If I can be of further assistance in this matter please contact me.

Sincerely,

Calvin Viator, Ph.D.

*Member of*
*Louisiana Agricultural Consultants Association*

*SUGARCANE·INSECTS & DISEASES*

*SOYBEAN·INSECTS & DISEASES*

*SOIL SAMPLING SERVICE*

REPORT NUMBER 315-0541

# A&L Analytical Laboratories, Inc.

411 North Third Street • Memphis, TN 38105-2723 • (901) 527-2780 • FAX: (901) 526-1031

ACCT# 00569

SEND TO: CALVIN VIATOR
AG CONSULTANT
222 RIENZI DR.
THIBODAUX,LA 70301

GROWER: WILL TERRY FARMS.

SAMPLES SUBMITTED BY:

DATE OF REPORT 11/11/92 PAGE 1

## SOIL ANALYSIS REPORT

| SAMPLE NUMBER | LAB NUMBER | ORGANIC MATTER % RATE | ORGANIC MATTER ENR lbs./A | PHOSPHORUS $P_1$ (Weak Bray) ppm-P RATE | PHOSPHORUS $P_2$ $NaHCO_3$-P ppm-P RATE | POTASSIUM K ppm-K RATE | MAGNESIUM Mg ppm-Mg RATE | CALCIUM Ca ppm-Ca RATE | SODIUM Na ppm-Na RATE | pH SOIL pH | pH BUFFER INDEX | Cation Exchange C.E.C. meq/100g | COMPUTED PERCENT BASE SATURATION % K | % Mg | % Ca | % H | % Na |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WT1 | 4556 | 1.0 | 64 | 9L | 40H | 58VL | 320VH | 1520H | 42VL | 7.2 | | 10.6 | 1.4 | 25.2 | 71.7 | | 1.7 |
| WT2 | 4557 | 0.8 | 60 | 9L | 45H | 36VL | 293VH | 1250H | 49VL | 7.4 | | 9.0 | 1.0 | 27.1 | 69.5 | | 2.4 |
| WT3 | 4558 | 1.7 | 78 | 19M | 40H | 61VL | 233VH | 2060H | 19VL | 7.2 | | 12.5 | 1.3 | 15.6 | 82.4 | | 0.7 |

(SEE EXPLANATION ON BACK)

| SAMPLE NUMBER | NITRATE $NO_3$ ppm-$NO_3$-N RATE | SULFUR S ppm-S RATE | ZINC Zn ppm-Zn RATE | MANGANESE Mn ppm-Mn RATE | IRON Fe ppm-Fe RATE | COPPER Cu ppm-Cu RATE | BORON B ppm-B RATE | EL DES LIME RATE | SOLUBLE SALTS mmhos/cm RATE |
|---|---|---|---|---|---|---|---|---|---|
| WT1 | | 7L | 1.2L | | | | 0.9M | | 0.3L |
| WT2 | | 7L | 1.0VL | | | | 0.6M | | 0.3L |
| WT3 | | 7L | 1.9L | | | | 0.6M | | 0.2L |

**REMARKS**

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

A & L ANALYTICAL LABORATORIES, INC.

BY: Richard Large
RICHARD LARGE

# Appendix I
# Review Comment Matrix

# Public Review Comment Matrix
# Morgan City, LA Environmental Assessment

| Item | Section | Page | Paragraph | Line(s) | Reviewer | Comment | Response |
|---|---|---|---|---|---|---|---|
| 1. | 2.2.1 | 2-2 | N/A | N/A | James P. Evans, III | Your discussion of Alternative A, the restoration of the site to its original configuration, Paragraph 2.2.1 Demolition Activities discusses the demolition of the buildings, HVAC units within the buildings, chain link fencing, and other items. However, the demolition of the concrete slab is not mentioned. The concrete slab is the most significant structure on the site. Its demolition will create the largest amount of debris from the site. The disposal of this debris will have a significant environmental impact. These items should be considered in the Environmental Assessment of the site. | None—The concrete slab is identified in Section 2.2.1.<br><br>If a further discussion on demolition of the concrete slab and its impacts is recommended, we will provide one. |
| 2. | 2.2.2 | 2-3 | N/A | N/A | James P. Evans, III | Paragraph 2.2.2 Restoration Activities does not discuss the either quantity or the quality of the soil that will be required to restore the soil to original composition. A base line chemical analysis of the soil was made prior to construction. This composition is required for the site to be accepted as being in its original condition as required by the lease. Also the neither the quantity | • Included a copy of the original soil analysis in Appendix H.<br>• Included verbiage from the lease in Sections 2.2.2 and 4.5.2 stating that the Government will ensure sufficient soil |

| Item | Section | Page | Paragraph | Line(s) | Reviewer | Comment | Response |
|---|---|---|---|---|---|---|---|
| | | | | | | of soil needed to fill the cavity created by the removal of the cement slab nor the source of this soil is discussed. These should also be discussed in the Draft EA. | samples are taken and analyzed to determine the suitability for growing sugarcane or other commercial crops if Alternative A is chosen.<br>• Included a table in Section 2.2.2 that shows each facility/structure, its components, and the calculated cubic feet of soil that would be needed as back fill. |

# Appendix J
# Air Emission Calculations

# USAF Air Conformity Applicability Model

## Emissions Summary Information

Scenario:  Operations Building

### Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 |

# USAF Air Conformity Applicability Model

## Emissions Summary Information

Scenario:  Vehicle Maintenance Building

Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.023 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.023 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.023 | 0.00 |

# USAF Air Conformity Applicability Model

Emissions Summary Information

Scenario:  Payload Service Building

Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 |

# USAF Air Conformity Applicability Model

## Emissions Summary Information

Scenario:  Electrical Power Station Building

### Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.0062 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0062 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0062 | 0.00 |

# USAF Air Conformity Applicability Model

## Emissions Summary Information

Scenario:  Hazardous Waste Building

### Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.0014 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0014 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0014 | 0.00 |

# USAF Air Conformity Applicability Model

Emissions Summary Information

Scenario: Mechanical Building

Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.0025 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0025 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0025 | 0.00 |

# USAF Air Conformity Applicability Model

## Emissions Summary Information

Scenario: Security Building

Emissions Summary Report for 2010

| | Emissions, Ton/Year | | | | | |
|---|---|---|---|---|---|---|
| SOURCE CATEGORY | CO | NOX | SO2 | VOC | PM10 | PM2.5 |
| Area Sources | | | | | | |
| Demolition | 0.00 | 0.00 | 0.00 | 0.00 | 0.0032 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0032 | 0.00 |
| Grand Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.0032 | 0.00 |

# Appendix K
# Best Management Practices (BMPs) to be Incorporated under Implementation of Alternative A

# BEST MANAGEMENT PRACTICES (BMPs)
**(To be incorporated under implementation of Alternative A)**

## DUST CONTROL

Dust Control BMPs reduce surface activities and air movement that causes dust to be generated from disturbed soil surfaces. Construction sites can generate large areas of soil disturbance and open space for wind to pick up dust particles. Airborne particles pose a dual threat to the environment and human health. First, dust can be carried offsite, thereby increasing soil loss from the construction area and increasing the likelihood of sedimentation and water pollution. Second, blowing dust particles can contribute to respiratory health problems and create an inhospitable working environment.

Dust control measures are applicable to any construction site where there is the potential for air and water pollution from dust traveling across the landscape or through the air. Dust control measures are especially important in arid or semiarid regions, where soil can become extremely dry and vulnerable to transport by high winds. Implement dust control measures on all construction sites where there will be major soil disturbances or heavy equipment construction, activity, such as clearing, excavation, demolition, or excessive vehicle traffic.

- *Vegetative Cover:* In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetative cover provides coverage to surface soils and slows wind velocity at the ground surface, thus reducing the potential for dust to become airborne.

- *Mulch:* Mulching can be a quick and effective means to dust control for a recently disturbed area.

- *Wind Breaks*: Windbreaks are barriers (either natural or constructed) that reduce wind velocity through a site and, therefore, reduce the possibility of suspended particles. Windbreaks can be trees or shrubs left in place during site clearing or constructed barriers such as a wind fence, tarp curtain, hay bale, crate wall, or sediment wall.

- *Tillage*: Deep tillage in large open areas brings soil clods to the surface where they rest on top of dust, preventing it from becoming airborne.

## EROSION CONTROL

Erosion control is any source control practice that protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind. Erosion control is also referred to as soil stabilization. Erosion control consists of preparing the soil surface and implementing one or more BMPs to disturbed soil areas.

All inactive soil-disturbed areas on the project site, and most active areas prior to the onset of rain, should be protected from erosion. Soil disturbed areas may include relatively flat areas as

well as slopes.  Typically, steep slopes and large exposed areas require the most robust erosion controls; flatter slopes and smaller areas still require protection, but less costly materials may be appropriate for these areas.  To be effective, erosion control BMPs must be implemented at slopes and disturbed areas to protect them from concentrated flows.

- *Chemical Stabilization*
  - Chemical stabilizers, also known as soil binders or soil palliatives, provide temporary soil stabilization.  Vinyl, asphalt, or rubber is sprayed onto the surface of exposed soils to hold the soil in place and minimize erosion from runoff and wind.  These materials are easily applied to the surface of the soil, can stabilize areas where vegetation cannot be established, and provide immediate protection.
  - Chemical stabilizers, if improperly applied, can create impervious surfaces where water cannot infiltrate and could increase stormwater runoff.  In addition, chemical stabilization is usually more expensive than vegetative practices.

- *Compost Blankets*
  - A compost blanket is a layer of loosely applied compost or composted material that is placed on the soil in disturbed areas to control erosion and retain sediment resulting from sheet-flow runoff.  When properly applied, the erosion control compost forms a blanket that completely covers the ground surface.  This blanket prevents stormwater erosion by (1) presenting a more permeable surface to the oncoming sheet flow, thus facilitating infiltration; (2) filling in small rills and voids to limit channelized flow; and (3) promoting establishment of vegetation on the surface.
  - The compost blanket can be vegetated by incorporating seeds into the compost before it is placed on the disturbed area (recommended method) or the seed can be broadcast onto the surface after installation.
  - Limitations for compost blanket applications are dependent on the site specifications.  Compost blankets are not generally used on slopes greater than 2:1 or in areas where concentrated runoff or water flow will occur.

- *Geotextiles*
  - Geotextiles are porous fabrics also known as filter fabrics, road rugs, synthetic fabrics, construction fabrics, or simply fabrics.  Geotextiles are manufactured by weaving or bonding fibers that are often made of synthetic materials such as polypropylene, polyester, polyethylene, nylon, polyvinyl chloride, glass, and various mixtures of these materials.  As a synthetic construction material, geotextiles are used for a variety of purposes such as separators, reinforcement, filtration and drainage, and erosion control.
  - Geotextiles (primarily synthetic types) have the potential disadvantage of disintegrating when exposed to light.  Consider this before installing them.  Some geotextiles might increase runoff or blow away if not firmly anchored.  Depending on the type of material used, geotextiles might need to be disposed of in a landfill, making them less desirable than vegetative stabilization.  If the geotextile fabric is not properly selected, designed, or installed, its effectiveness may be reduced drastically.

- *Gradient Terraces*
  - Gradient terraces are earthen embankments or ridge and channel systems that reduce erosion by slowing, collecting, and redistributing surface runoff to stable outlets that increase the distance of overland runoff flow. Terraces hold moisture and help trap sediments, minimizing sediment-laden runoff.
  - Gradient terraces are inappropriate for use on sandy or shallow soils, or on steep slopes. If too much water permeates a terrace system's soils, sloughing could occur, potentially increasing cut and fill costs.

- *Mulching*
  - Mulching is an erosion control practice that uses materials such as grass, hay, wood chips, wood fibers, straw, or gravel to stabilize exposed or recently planted soil surfaces. Mulching is highly recommended and is most effective when used in conjunction with vegetation. In addition to stabilizing soils, mulching can reduce stormwater velocity and improve the infiltration of runoff. Mulching can also aid plant growth by holding seeds, fertilizers, and topsoil in place, preventing birds from eating seeds, retaining moisture, and insulating plant roots against extreme temperatures.
  - Mulching, matting, and netting might delay seed germination because the cover changes soil surface temperatures. The mulches themselves are subject to erosion and may be washed away in a large storm. Maintenance is necessary to ensure that mulches provide effective erosion control.

- *Riprap*
  - Riprap is a layer of large stones used to protect soil from erosion in areas of concentrated runoff. Riprap can also be used on slopes that are unstable because of seepage problems.
  - The steepness of slope limits the applicability of riprap, because slopes greater than 2:1 can cause riprap loss due to erosion and sliding. If used improperly, riprap can actually increase erosion. In addition, riprap can be more expensive than other stabilization options.

- *Seeding*
  - Seeding is used to control runoff and erosion on disturbed areas by establishing perennial vegetative cover from seed. It reduces erosion and sediment loss and provides permanent stabilization. This practice is economical, adaptable to different site conditions, and allows selection of a variety of plant materials.
  - The effectiveness of seeding can be limited by high erosion during establishment, the need to reseed areas that fail to establish, limited seeding times, or unstable soil temperature and soil moisture content during germination and early growth. Seeding does not immediately stabilize soils; therefore, use temporary erosion and sediment control measures to prevent pollutants from disturbed areas from being transported off the site.

- *Sodding*
  - Sodding is a permanent erosion control practice and involves laying a continuous cover of grass sod on exposed soils. Sodding can stabilize disturbed areas and reduce the velocity of stormwater runoff. Sodding can provide immediate vegetative cover for critical areas and stabilize areas that cannot be readily vegetated by seed.
  - Compared to seed, sod is more expensive and more difficult to obtain, transport, and store. To ensure successful establishment, prepare the soil and provide adequate moisture before, during, and after installation. If sod is laid on poorly prepared soil or an unsuitable surface, the grass will die quickly because it is unable to root. After installation, inadequate irrigation can cause root dieback or cause the sod to dry out.

- *Soil Retention*
  - Soil retention measures are structures or practices that hold soil in place or keep it contained within a site boundary. They include grading or reshaping the ground to lessen steep slopes or shoring excavated areas with wood, concrete, or steel structures. Some soil-retaining measures are used only for erosion control, while others are also used to protect workers during excavation projects.
  - Soil-retention structures, if properly designed and installed, can effectively prevent erosion in areas with steep slopes and erodible soils. However, to be effective these soil-retention structures should be designed to handle expected loads. Heavy rains can damage or destroy these structures and result in sediment inputs to water bodies.

- *Soil Roughening*
  - Soil roughening is a temporary erosion control practice often used in conjunction with grading. Soil roughening involves increasing the relief of a bare soil surface with horizontal grooves by either stair-stepping (running parallel to the contour of the land) or using construction equipment to track the surface. Slopes that are not fine graded and left in a roughened condition can also reduce erosion. Soil roughening reduces runoff velocity, increases infiltration, reduces erosion, traps sediment, and prepares the soil for seeding and planting by giving seed an opportunity to take hold and grow.
  - Soil roughening provides moderate erosion protection for bare soils while vegetative cover is being established. It is inexpensive and simple for short-term erosion control when used with other erosion and sediment controls.

- *Temporary Slope Drain*
  - A temporary slope drain is a flexible conduit for stormwater that extends the length of a disturbed slope to divert the flow and serve as a temporary outlet. Temporary slope drains, also called pipe slope drains, convey runoff without causing erosion on or at the bottom of the slope.
  - The area drained by a temporary slope drain should not exceed five acres. In addition, physical obstructions substantially reduce the drain’s effectiveness.

- *Wind Fences and Sand Fences*
  - Sand fences are barriers made of small, evenly spaced wooden slats or fabric. They are erected to reduce wind velocity and to trap blowing sand. Sand fences can be used as perimeter controls around open construction sites to keep sediments from being blow offsite by the wind. The spaces between the fence slats allow wind and sediment to pass through but reduce the wind's speed, causing sediment to deposit along the fence.
  - Wind fences are appropriate for areas with loose, fine-textured soils that can be transported offsite by high winds. They are especially advantageous for construction sites with large areas of cleared land or in arid regions where blowing sand and dust can be problematic. Wind and sand fences do not control sediment carried in stormwater runoff. Therefore, wind fences should be installed with other sediment and erosion control measures that capture sediment from runoff.

## LOUISIANA BLACK BEAR HABITAT

The proposed project site may be located within threatened Louisiana black bear (*Ursus americanus luteolus*) critical habitat and is approximately 1,500 feet from breeding habitat. If demolition were chosen as the appropriate course of action, then the United States Fish and Wildlife Service (USFWS) would be concerned about possible disturbance to nearby Louisiana black bear populations.

The threatened Louisiana black bear is primarily associated with forested wetlands; however, it utilizes a variety of habitat types, including marsh, spoil banks, and upland forests. Within forested wetlands, black bear habitat requirements include soft and hard mast for food, thick vegetation for escape cover, vegetated corridors for dispersal, large trees for den sites, and isolated areas for refuge from human disturbance. Remaining Louisiana black bear populations occur in the Tensas River Basin, the Upper Atchafalaya River Basin, and coastal St. Mary and Iberia Parishes. The primary threats to the species are continued loss of bottomland hardwoods and fragmentation of remaining forested tracts. In addition to habitat loss, human-bear conflicts are a major threat to the conservation and protection of the Louisiana black bear.

The USFWS and State of Louisiana Department of Wildlife and Fisheries recommend incorporating the following BMPs to avoid impacts to the Louisiana black bear during demolition and restoration activities:

- *Avoidance of work during the denning season*
  - Louisiana black bears, particularly pregnant females, normally den from December through April. Preferred den sites include bald cypress and water-tupelo trees with visible cavities, that have a diameter at breast height of 36 inches or greater, and which occur in or along rivers, lakes, streams, bayous, sloughs, or other water bodies.
  - In order to avoid disturbance of denning bears and possible abandonment of cubs, the USFWS recommends that work in the project area be prohibited during the denning season.

- To further protect denning bears, the USFWS has extended legal protection to actual or candidate den trees. As the terms imply, “actual den tree” refers to any tree used by a denning bear during the winter and early spring seasons. Candidate den trees are defined in the final rule as bald cypress and tupelo gum with visible cavities, having a diameter at breast height of 36 inches or greater, and occurring in or along rivers, lakes, streams, bayous, sloughs, or other water bodies.

- *Precautions to take while working in the project area*
  - The USFWS strongly urges employees and contractors to avoid bears, if possible. Bears will typically avoid humans; however, with this type of activity and its encroachment into occupied habitat, sightings of bears may occur.
  - Once bears become habituated to human food sources, especially garbage, it becomes difficult, if not impossible, to control their nuisance behavior. In such cases, the alternatives are to remove the animal from the wild or destroy the animal. The most effective mechanism to reduce nuisance behavior and human-bear conflicts is to eliminate attractants (e.g., garbage, human food wastes, pet/livestock feeds, etc); in the long-term, this has also proven to be the most cost-effective and beneficial approach. Therefore, in order to prevent sightings from turning into confrontations, workers should be cautioned to not leave food or garbage in the field. In addition, the LA Department of Wildlife and Fisheries recommends the use of bear-proof garbage containers onsite.

**RUNOFF CONTROL**

- *Grass-Lined Channels:*
  - A grass-lined channel conveys stormwater runoff through a stable conduit. Vegetation lining the channel slows down concentrated runoff. Because grassed channels are not usually designed to control peak runoff loads by themselves, they are often used with other BMPs, such as subsurface drains and riprap stabilization.
  - Where moderately steep slopes require drainage, grassed channels can include excavated depressions to enhance runoff storage, decrease flow rates, and improve pollutant removal.
  - The first choice of lining should be grass or sod because this reduces runoff velocity and provides water quality benefits through filtration and infiltration. If the velocity of the channel would erode the grass or sod, riprap, concrete, or gabions can be used. Geotextile materials can be used in conjunction with either grass or riprap linings to provide additional protection at the soil-lining interface. Use grassed channels in areas where erosion-resistance conveyances are needed, including areas with highly erodible soils and moderately steep slopes (though less than five percent)
  - If grassed channels are not properly installed, they can change the natural flow of surface water and adversely affect downstream waters. In addition, if the design capacity is exceeded by a large storm event, the vegetation might not be adequate to prevent erosion and the channel might be destroyed. Clogging with sediment and debris reduces the effectiveness of grass-lined channels for stormwater conveyance.

- *Permanent Slope Diversions*
    - Permanent slope diversions are designed to transport runoff down a slope in a manner that minimizes the potential for erosion. Diversions can be constructed by creating channels laterally across slopes to intercept the down-slope flow of runoff. The channels have a supporting earthen ridge on the bottom sides to reduce slope length, collect stormwater runoff, and deflect the runoff to outlets that convey it without causing erosion.
    - Diversions should be considered for use on slopes where uncontrolled runoff might cause property damage due to erosion or resulting sedimentation. They can also be used to promote the growth of vegetation by redirecting flows while the vegetation is becoming established.
    - Immediately after constructing a vegetated ridge and channel, seed and mulch them along with any disturbed areas that drain into the diversion. To prevent soil from moving into the diversion, sediment-trapping measures must remain in place in case the upslope area is not stabilized. Remove all obstructions and unsuitable material, such as trees, brush, and stumps, from the channel area and dispose of them so the diversion can function properly.

- *Temporary Diversion Dikes*
    - An earthen perimeter control usually consists of a dike or a combination dike and channel constructed along the perimeter of and within the disturbed part of a site. An earthen perimeter control is a ridge of compacted soil, often accompanied by a ditch or swale with a vegetated lining, at the top or base of a sloping disturbed area.
    - When on the upslope side of a site, earthen perimeter controls help to prevent surface runoff from entering a disturbed construction site. An earthen structure located upslope can improve working conditions on a construction site. It can prevent an increase in the total amount of sheet flow runoff traveling across the disturbed area and thereby lessen erosion on the site.
    - Earthen perimeter control structures can also be located on the down slope side of a site. They divert sediment-laden runoff created onsite to onsite sediment-trapping devices, preventing soil loss from the disturbed area.
    - Earth dikes are an effective means of diverting sediment-laden stormwater runoff around a disturbed area. However, the concentrated runoff in the channel or ditch has an increased erosion potential. Therefore, diversion dikes should be directed to sediment-trapping devices, where sediment can settle out of the runoff before it is discharged to surface waters. Sediment-trapping devices that work with temporary diversion structures include sediment basins, sediment chambers/filters, and any other structures designed to allow sediment to be collected for proper disposal.

**SEDIMENT CONTROL**

Sediment control is any practice that traps soil particles after they have been detached and moved by rain, flowing water, or wind. Sediment control measures are usually passive systems that rely on filtering or settling the particles out of the water or wind that is transporting them.

Sediment control BMPs include those practices that intercept and slow or detain the flow of stormwater to allow sediment to settle and be trapped. Sediment control practices can consist of installing linear sediment barriers (such as a silt fence); providing fiber rolls or gravel bag berms to break up slope length or flow; or constructing a sediment trap or sediment basin. Linear sediment barriers are typically placed below the toe of exposed and erodible slopes, down-slope of exposed soil areas, around soil stockpiles, and at other appropriate locations along the site perimeter.

Sediment control BMPs are most effective when used in conjunction with erosion control BMPs. The combination of erosion control and sediment control is usually the most effective means to prevent sediment from leaving the project site and potentially entering storm drains or receiving waters.

- *Brush Barrier*
  - Brush barriers are perimeter sediment control structures constructed of material such as small tree branches, root mats, stone, or other debris left over from site clearing and grubbing. Brush barriers can be covered with a filter cloth to stabilize the structure and improve barrier efficiency.
  - The drainage area for brush barriers must be no greater than 0.25 acre per 100 feet of barrier length. In addition, the drainage slope leading down to a brush barrier must be no greater than 2:1 and no longer than 100 feet. Brush barriers have limited usefulness because they are constructed of materials that decompose.
  - Brush barriers are not appropriate for high-velocity flow areas. A large amount of material is needed to construct a useful brush barrier; therefore, alternative perimeter controls such as a fabric silt fence may be more appropriate for sites with little material from clearing. Brush barriers provide temporary storage for large amounts of cleared material from a site, however, this material should be removed from the site after construction activities have ceased and the area is stabilized.

- *Compost Filter Berms*
  - A compost filter berm is a dike of compost or a compost product that is placed perpendicular to sheet flow runoff to control erosion in disturbed areas and retain sediment. The compost filter berm, which is trapezoidal in cross section, provides a three-dimensional filter that retains sediment and other pollutants while allowing the cleaned water to flow through the berm.
  - Compost filter berms are generally placed along the perimeter of a site, or at intervals along a slope, to capture and treat stormwater that runs off as sheet flow.
  - Compost filter berms are applicable to construction sites with relatively small drainage areas, where stormwater runoff occurs as sheet flow. Common industry practice is to use compost filter berms in drainage areas that do not exceed 0.25 acre per 100 feet of berm length and where flow does not typically exceed 1 cubic foot per second.

- *Compost Filter Socks*
    - A compost filter sock is a type of contained compost filter berm. It is a mesh tube filled with composted material that is placed perpendicular to sheet-flow runoff to control erosion and retain sediment in disturbed areas.
    - Compost filter socks offer a large degree of flexibility for various applications. To ensure optimum performance, heavy vegetation should be cut down or removed, and extremely uneven surfaces should be leveled to ensure that the compost filter sock uniformly contacts the ground surface.

- *Construction Entrances*
    - The purpose of stabilizing entrances to a construction site is to minimize the amount of sediment leaving the area as mud and sediment attached to vehicles. Installing a pad of gravel over filter cloth where construction traffic leaves a site can help stabilize a construction entrance. As a vehicle drives over the pad, the pad removes mud and sediment from the wheels and reduces soil transport off the site.

- *Fiber Rolls*
    - Fiber rolls are tube-shaped erosion-control devices filled with straw, flax, rice, coconut fiber material, or composted material.
    - Fiber rolls complement permanent BMPs used for source control and revegetation. When installed in combination with straw mulch, erosion control blankets, hydraulic mulches, or bounded fiber matrices for slope stabilization, these devices reduce the effects of long or steep slopes. Fiber rolls also help to slow, filter, and spread overland flows. This helps to prevent erosion and minimizes rill and gully development.

- *Filter Berms*
    - A gravel or stone filter berm is a temporary ridge made up of loose gravel, stone, or crushed rock. It slows and filters flow and diverts it from an open traffic area. It acts as an efficient form of sediment control. One type of filter berm is the continuous berm, a geosynthetic fabric berm that captures sand, rock, and soil.
    - Berms are intended to be used only in gently sloping areas (less than 10 percent). They do not last very long unless they are maintained regularly because they are prone to clogging with mud and soil from vehicle tires.

- *Sediment Basins and Rock Dams*
    - Sediment basins and rock dams can be used to capture sediment from stormwater runoff before it leaves a construction site. Both structures allow a pool to form in an excavated or natural depression, where sediment can settle. The pool is dewatered through a single riser and drainage hole leading to a suitable outlet on the downstream side of the embankment or through the gravel of the rock dam.

- *Sediment Filters and Sediment Chambers*
    - Sediment filters are sediment-trapping devices typically used to remove pollutants from stormwater runoff.  Sediment filters have four components: (1) inflow regulation, (2) pretreatment, (3) filter bed, and (4) outflow mechanism.
    - Inflow regulation is diverting stormwater into the sediment-trapping device. After runoff enters the filter system, it enters a pretreatment sedimentation chamber.  This chamber is used as a preliminary settling area for large debris and sediments.  It is usually no more than a wet detention basin.  As water reaches a predetermined level, it flows over a weir into a bed of some filter medium.  The medium is typically sand, but it can consist of sand, soil, gravel, peat, compost, or a combination.  The filter bed removed small sediments and other pollutants from the stormwater as it percolates through the filter medium.  Finally, treated flow exits the sediment filter system via an outflow mechanism.  It returns to the stormwater conveyance system.

- *Sediment Traps*
    - Sediment traps are small impoundments that allow sediment to settle out of construction runoff.  They are usually installed in a drainageway or other point of discharge from a disturbed area.  Temporary diversions can be used to direct runoff to the sediment trap.
    - Sediment traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale.  An outlet or spillway is often constructed using large stones or aggregate to slow the release of runoff.
    - Do not use sediment traps for drainage areas greater than five acres.  The effective life span of these structures is usually limited to 24 months.  Although sediment traps allow eroded soils to settle, their detention periods are too short for removing fine particles like silts and clays.

- *Silt Fences*
    - Silt fences are used as temporary perimeter controls around sites where construction activities will disturb the soil.
    - A silt fence consists of a length of filter fabric stretched between anchoring posts spaced at regular intervals along the site at low/down slope areas.
    - Silt fences apply to construction sites with relatively small drainage areas.  They are appropriate in areas where runoff will occur as low-level flow, not exceeding 0.5 cubic feet per second.  The drainage area for silt fences should not exceed 0.25 acre per 100-foot fence length.  The slope length above the fence should not exceed 100 feet.

- *Vegetated Buffers*
    - Vegetated buffers are areas of natural or established vegetation maintained to protect the water quality of neighboring areas.  Buffer zones slow stormwater runoff, provide an area where runoff can permeate the soil, contribute to ground water recharge, and filter sediment.

- o Vegetated buffers can be used in any area able to support vegetation. They are most effective and beneficial on floodplains, near wetlands, along stream banks, and on unstable slopes.

- *Vehicle Washing Station*
  - o A vehicle washing station can be established at the entrance of a construction site. Using wash stations routinely can remove a lot of sediment from vehicles before they leave the site. Diverting runoff from vehicle washing stations into a sediment trap helps to make sure the sediment from vehicles stays onsite and is handled properly.

**WETLANDS/FLOODPLAINS**

Temporary and indirect impacts to wetlands would be mitigated using various BMPs, which would ensure that all work would minimize impacts to wetland areas and include the following:

- Erosion control measures, including temporary soil stabilization measures (soil roughening, mulching, compost blankets, etc.) and structures such as berms or swales, with or without a diversion channel, to prevent and/or slow runoff across disturbed areas and/or divert runoff to sediment basins;

- Sediment control measures, such as silt fences, sediment traps, and sediment basins;

- Water quality treatment measures to capture and treat runoff and to prevent runoff from entering the nearby wetlands;

- Use of designated areas for vehicle staging to minimize disturbance of wetlands and vegetated areas;

- Revegetation of disturbed areas as quickly as possible with native vegetation throughout demolition; and

- Where construction equipment must be positioned on or across the nearby wetlands, place a protective layer of geotextile/straw/soil to be removed after construction.